2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

the end of January, but the rains continue unabated until the end of March or April. The rain is usually ample for cultivation purposes, although the heaviest fall may come at an inconvenient time for the Bemba staple crop. 132

The wet season is followed by a dry and windy season which lasts from April to July. During these months dry, gusty winds blow almost continuously, and the temperature falls to a minimum in July (between 51° and 77°). The nights are unpleasantly chilly, with ground frost in specially high districts. The rivers begin to recede. These are the harvest months, and the season in which the new millet gardens are prepared.

Bemba cultivation is entirely dependent on this type of rainfall and is limited in most cases to the production of one crop a year instead of two as in those parts of Tanganyika where there is a double rainy season. [241 171]

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

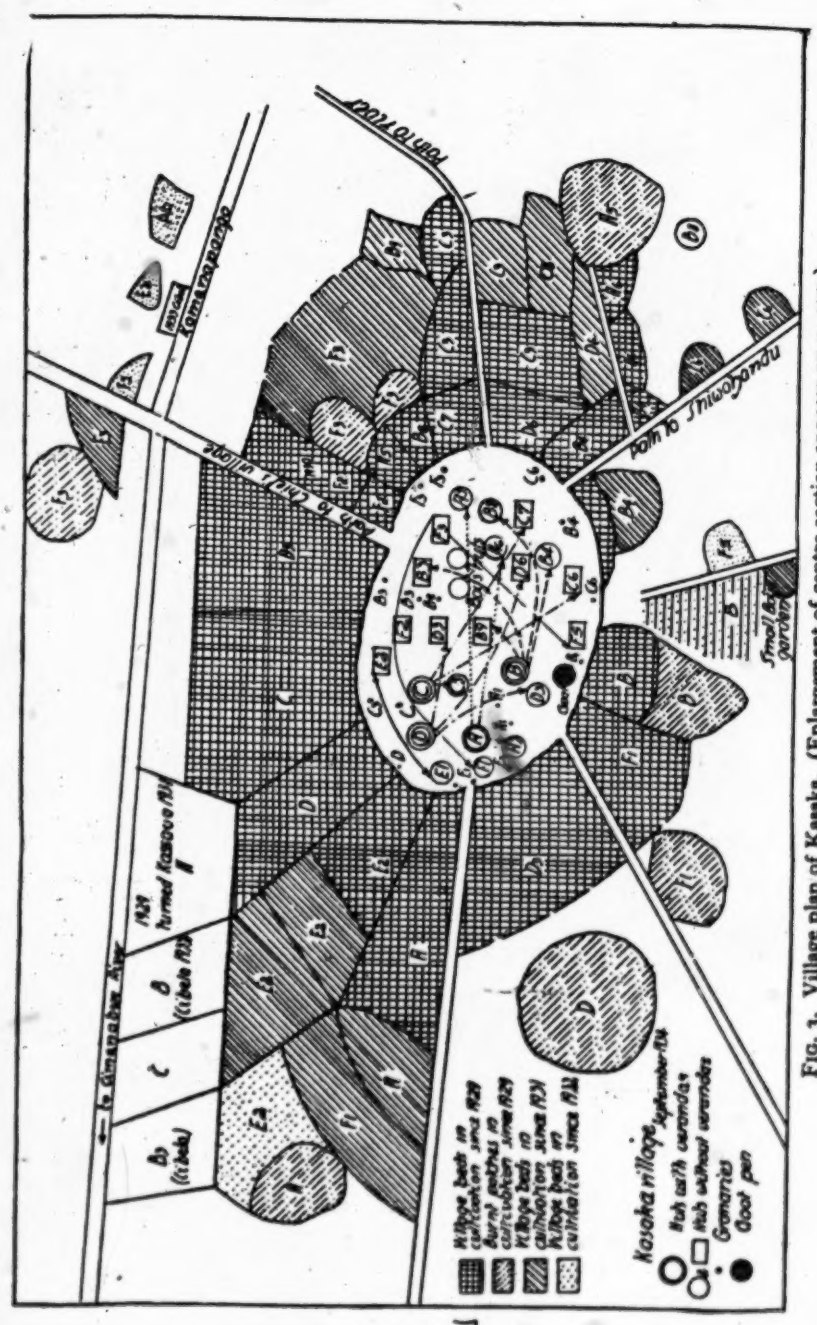
[facing p. 146]

Women hoeing up an old millet garden before sowing.

Mound cultivation. Men hoeing up new ground into mounds.

142
244
211
302

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5



621
241
311
361

FIG. 3. Village plan of Kasaka. (Enlargement of centre section appears on p. 177.)

[p. 167]

2:Richards £-5 (1930-1934)1939
FQ5 Bemba FQ5

his supplies indefinitely. To-day the big chiefs make proper gardens every two years (*ukutema pakalamba*), and fill enormous granaries which they reckon to last for two seasons or more. They definitely do not try to produce the maximum amount of food possible each year as the following table shows. It appears that

Annual Cultivation by Four Chiefs

1 = Full cultivation. ½ = Small gardens.
0 = No cultivation. .. = No records obtained.

	1926	1927	1928	1929	1930	1931	1932	1933
Citimukulu	..	..	..	..	..	1	½	1
Nkula	1	0	1	½	½	1	0	½
Mwamba	..	1	0	Village moved	0	1	½	½
Nkolemfumu	..	..	..	..	..	1	0	0

this was always the custom even when labour was easier to get. Thus the *mfumu* had about four times as much food accumulated as a commoner, but there was not a much greater difference than this between them. In any case the difference in wealth was a difference in power to distribute, not in the amount possessed.

The position of the commoner is different. Not only has he no reason to accumulate beyond a certain point, sufficient to give him enough to eat and to distribute in a small way, but he is also afraid to do so. To be much better off than his fellows would be dangerous. A man who is full when others are hungry is hardly considered to have achieved the good fortune by natural means. An occasional stroke of good luck is not resented, but to be permanently much more prosperous than the rest of the village would almost certainly lead to accusations of sorcery.[1] It might also be thought presumptuous (*icilumba*), an aping of the chief, and it would certainly cause a number of elderly female relatives to come and claim support from the lucky man. For these reasons the Bemba not only aims at a very modest competence, but he usually denies that he is as well off as he is. Unlike the Trobriand Islanders who boast about the fullness of their yam stores, the Bemba invariably denies that he has any food at all: 'We've simply swept the granary clean' (*twapyangafye*!) is his usual comment.[2]

[1] One of the reasons witchcraft is so much more common in urban areas where inequality in wealth is so much more striking.

[2] Compare the structure of the Trobriand granary designed to reveal the

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

i-fyalo). This is a term applied to the whole of the Bemba territory, but also used to describe the district under the rule of a particular chief. The Paramount and the territorial chiefs under him, such as Mwamba, Nkula, Nkolemfumu, Mpepo, Cikwanda, &c., each rule over a tract of country with more or less definite boundaries, which has its own name dating back to the very early days of the Bemba occupation.[1] Each of these districts is known as the *icalo* of such-and-such a chief. Some are sub-divided into smaller districts under the rule of a sub-chief. Thus the *icalo* may be defined as a political division, and its inhabitants have a certain economic unity since they all pay tribute to the one chief and expect to receive help, supernatural or material, from him.

Mpanga, the word used for 'bush', is also sometimes applied in a more restricted sense to mean the area immediately surrounding a headman's village, that is to say the few miles between one small stream and the next. The *bakabilo* or hereditary councillors of the Paramount, claim to be owners of their *mpanga* by right of descent from the first holders of their titles, who were appointed to the district by the first Citimukulu. Therefore they may not move their village beyond the distance between one river and the next. They claim supernatural powers over the area, and in some cases may prevent the chief from being carried through it.[2] But in the case of an ordinary headman the term *mpanga yandi* hardly means more than 'the neighbourhood of my village'.

Mpanga may also mean the strip of bush between one open marshy place and the next. This country is so well watered that a traveller along an inter-village path passes one tiny stream after another at intervals of four to five miles, and the Bemba make a rough calculation of distance by this means. 'We shall pass three *mpanga* and camp at a village in the fourth', they say, and the term gives some idea of the probable length of the journey.[3]

Cultivated land is divided into (*a*) *mputa*, or village mounds, a circular band about 300 yards across round the village, (*b*) *ifitemene* (sing. *icitemene*), the millet gardens which are cut in the bush each year, at first near the village and then farther and farther out until

[1] e.g. Ituna is the *icalo* of Mwamba, Icinga that of Nkula, &c.

[2] The Cimba, Munuca, Citikafula, Katenda, Cikutwe, all have this right since the sacred relics they possess are so powerful that they might harm the Paramount himself.

[3] C. Doke records the same method of measuring the journey's length among the Lamba, *The Lambas*, 1931, p. 18.

2 Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 823 they lie sometimes eight or ten miles away. The word *icitemene* is derived from *kutema* (to cut down trees) and it is applied to a new millet garden in the course of being cleared and prepared for sowing. Hence Government reports now refer to the '*citemene* system' to describe the characteristic Bemba method of clearing the bush. However the garden, after it has been sown, is known as an *ubukula* (plur. *amakula*), and in its second and subsequent years of life, when it is planted with other crops, it is called an *icifwani* (plur. *ififwani*) and continues under this name until the cultivated land reverts to bush. The average size of an *ubukula* has been calculated to be about one acre, for which a strip of bush about eight acres is usually cleared of trees, but the gardens, though roughly circular, have no fixed size or shape. A smaller *ubukula* usually less than a quarter of an acre in size, such as those planted with fast-growing millet (*mwangwe*), is known as an *akakumba* (*plur. ukukumba*).

823 It will be seen, therefore, that the descriptive terms applied to land never refer to fixed units of measurement, but either to the political district in which a man lives, to a natural vegetation division in which his successive villages are usually built (*mpanga*), or to the temporary use to which the land is being put (*mputa*, *icitemene*, *icifwani*, &c.).

The Chief as Land-owner.

423 622 643 A Bemba's right to the use of any part of the bush depends upon his political allegiances, first to a headman and then to a chief. He cannot cultivate as an isolated individual, even though he has uncontested rights of ownership of any land he may have cleared. Every Bemba reckons himself the subject of a territorial chief. He calls himself the '*umwina*' (subject, connexion of, member of) such-and-such a ruler, e.g. *umwina* Citimukulu, the subject of Citimukulu or by the historic name of the *icalo* itself, *umwina* Lubemba, an inhabitant of Lubemba.[1] In the first place, then, how does his status as a subject actually determine his use of land? What right has he to select in the *icalo* of his chief a strip of bush for a village site, or for agricultural purposes?

[1] The word '*umwina*' is difficult to translate. Besides the meanings given above, husband and wife refer to each other as *umwina uandi*, 'the person connected with me, or with whom I am tied', and a football team on the copper-belt uses the word for a member of the team. It must be distinguished from *umwine*, the owner of a thing or leader of an affair.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

and in the case of a big village the circular strip of land surrounding the houses is only barely adequate to give each his due. The same desire to avoid quarrelling over land is still apparent, but fixed rules govern its selection. The site of a man's *mputa* is determined by the position of his hut. When a village is being built the old men have the first right to choose where they will build their huts. After that the young men group themselves—usually together at one end of the village. The strip of ground behind each hut on the outside ring is the property of the owner of the house. Those who have built in the centre of the village must cultivate beyond. The owners of the outside houses are allowed to cultivate as far as the nearest natural boundary, such as a river or path, if they desire to do so, otherwise they must announce where they intend to stop so that others can cultivate beyond them.

The village plan on p. 177 shows how owners A, A5, B, B4, B9, C, C7, D, D3, D6, F, F2 cultivate ground immediately behind their huts while the others have strips farther out into the bush.

At first sight it is difficult to understand how the conflicting aims and ambitions of each individual can be satisfied in practice. But it must be remembered that a Bemba, cultivating alone, cannot hope to dig up more than a certain amount of land, and he estimates his capabilities in the coming year with fair precision, as do also his neighbours. But his own conception of good form seems to weigh with him more than such purely economic considerations. He does not want to appear presumptuous, or to make claims beyond his status. It is bad for a young man to demand as much ground as an old, even if he occupies an outside hut, or for a single woman to fix wide boundaries to her patch. Fear of the accusation of pride (*icilumba*) or that reputation for personal ambition, which is so often associated with charges of witchcraft in this society, are important factors in fixing the limits of village beds, and the whole division seems to be arranged without much formal allocation. A man estimates his neighbour's intentions and gauges public opinion as to his own status, and acts accordingly. He does not even put boundaries (*mpaka*) between his beds and those of another for fear of accusations of sorcery, and if there is a doubtful issue it can be taken for granted that personal relations and questions of relative status are always put before agricultural considerations. I have seen at least two cases where a man considered that his privilege had been infringed upon, but decided

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

361 [342 221]

the chief and his followers have to move into temporary grass shelters (*imitanda*) during the tree-cutting and harvest seasons, and commoners will camp near their gardens for as many as four months of the year. The *bakabilo*, or hereditary councillors of the Paramount Chief, are also prevented for politico-religious reasons from moving far afield. Of Citimukulu's 160 villages, 52 were under the rule of hereditary councillors or priests in 1934, and of this latter group I should judge that at least 30 were bound for traditional reasons to remain fixed to one locality. For commoners the choice is much freer, although they have a strong tendency to build within a five-mile radius of their relatives. But I have known them make a village on poor soil because they wanted to live on the motor road, or near to a white man's farm. The people also cultivate exhausted soil in areas near a white settlement like Kasama, where the villages move from site to site, sometimes at a distance of a quarter of a mile or so, in order to be near the town. The fishing villages on the banks of the Chambesi are similarly fixed without special reference to the soil possibilities since in this case the value of the fishing is greater than that of the agricultural produce. At Molema, near some valuable fishing pools in the Chambesi, the ground has been under continuous cultivation, chiefly with cassava, for four generations.[1] Apart from these special cases, it can be said that the majority of headmen build villages in the best soil they can find within an area of five or ten square miles of their last site.

Choice of Garden Sites.

241 242

Having founded his village, the next step for the Bemba is to choose his garden plots. In this case he is looking first and foremost for suitable ground for millet cultivation. He has no other object in mind. To select the most suitable spot for his garden he is guided first by certain general factors such as the presence or absence of plenty of high trees and grasses. He divides the *mpanga* into two main categories—the ordinary woodland (*umutengo*) in which gardens are made, and the tall grass-bush country (*icipya*, plur. *ifipya*) which passes locally into thickets (*amateshi*). The *ifipya* are not cultivated though they may be fertile. They are the haunts of buffalo and elephant and are commonly avoided by native paths. The hunter goes there but it is difficult to find a way

[1] Cf. Chap. XVI, p. 341.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241
242

through the high grass, and the native's attitude to such stretches of country-side can be gauged by the fact that they call a large expanse of grass-bush land 'a bad *icipya*'. In the familiar woodland of his villages and gardens he looks for trees that 'crowd close together' (*ukutitikana*), arguing that soil which yields good trees will give good food.[1] He also realizes that if the trees stand close together their branches will be easier to cut and pile. Some Bemba told me, in answer to questions, that certain trees and grasses indicated suitable soil for the making of gardens, and I collected from different, mostly elderly informants, a list of ten such trees and four grasses. But these natives, though they repeated to me the names of the different trees they looked for, did not, except in one case, attempt to describe the type of soil they expected to find associated with these special trees. They gave me the impression that they judged a stretch of bush as a whole—the trees and grasses and the general 'look' of the land, rather than by any systematic use of indicators, and their answers were by no means unanimous.[2] It appears, in fact, that the Bemba, in common with other ash-cultivators like the Kaionde, are far inferior to many other tribes in this territory in their power of land selection by means of tree-indicators, and that it is possible that the heavy dressing of ash they employ is sufficient to make soil differences of less importance to them as far as their millet gardens go.[3] Fundamentally, the Bemba is looking for plenty of branches and brushwood to make ash. After this, since he clears four to ten acres of bush in order to make a garden of an acre, besides choosing a thickly wooded strip of country to provide him with timber for burning, he has also to select the exact spot (*icitendekelo*) on which he wants to prepare his seed-beds. This he considers a very important point.

[1] Cf. Smith and Dale, op. cit., vol. i, p. 136, mentions that the same argument is used by the Ila.

[2] e.g. one informant said he looked for *umutondo* and *umuombo* trees; a second for *umuputu* and *umusompa*; a third for *mpundo*, *ngalati*, and *umusoso*; and a fourth for *icitando*, *umulambo*, and *icipolo*. As a negative indicator the Bemba speak of the presence of the *umufungo* tree (*Anisophyllea pomifera*), of which the bark is used to make a caustic alkaline salt to give bite to snuff. They maintain that this bitter substance destroys the millet seeds, but it is interesting that the tree is also believed to have a special magic influence over the soil and that a sapling must be ritually cut at the annual tree-cutting ceremonies of the chief. Its roots are used widely in curative medicine also. It is, therefore, difficult to know whether the tree is avoided on account of its physical or magical properties.

[3] Personal communication from Mr. C. G. Trapnell whose ecological report on this area is not yet published.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 242 He will even make two small gardens (*tukumbi*, *sing.* *kakumbi*) instead of one larger one, rather than sow on a patch which has been barren of trees (*kasensebele*).

Soil Types Recognized.

241 242 134 Besides his use of trees and grasses as indicators, the Bemba classifies different soils according to their colour, texture, and the type of country in which they are found. Thus they speak of—

(1) *Sand soils—Umushili wa nsenga* or *wa luta* (white)—a general term used to describe the white sandy soil which is common on the plateau. This soil they divide up into two types, *ulusenga lukalamba* (strong sand), i.e. the best type of sandy soil, and the *ulusenga lunono* ('weak sand') on which they realize that very little will grow. Sandy soils are also described with reference to their dryness or dampness. Thus *umushili wa nyika* refers to the damper soil of one of the marshy plains or open valleys referred to as a *nyika*, and *umushili wa lupili* (hill soil) is supposed to hold the moisture, according to the native account, 'because the hill puts a shadow over it', while the loose soil at the bottom of a hill, *umushili wa cisonso*, is dry and poor.

On these sandy soils the Bemba grow millet, Kaffir corn, legumes, ground-nuts, cassava, and sweet potatoes, but they do not hope to get two crops of millet from the poorer type of sand, and say they prefer to plant Kaffir corn on the redder, more loamy, soils. Legumes bear more heavily, they say, in the richer sandy soils, and cassava grows 'as thick as a man's arm' when it is in 'the great sand' or in soil by the river banks.

(2) *Red soil—Umushili wa kashika* or *umushili wa nkanka*—is a rich red clay loam which is said to stick together in lumps 'like porridge'. This type of soil fills the Bemba with enthusiasm. 'That is the soil for food', they cry. Any crop will grow on it they think, but it is the soil specially selected for Kaffir corn. They point out that Kaffir corn grown on sand will bear stunted plants after the first year, but when sown on red soil produces fine heads for three or four years. Only ground-nuts are sometimes described as growing better on sandy than on red soils.

(3) *Black soil—Umushili wa fita.* This term covers various types of soil, described as being 'strong' (*wakosa*), as sticky to the touch (*watelela*), or as not running through the fingers easily (*wakyafutuka*). Sometimes it contains clay (*wa lamba*), especially the very black soil

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 242 134

by the banks of a river (*na matipa*), which is so stiff that the Bemba tell of a typical nightmare in which the dreamer is trying frantically to run, but each time his foot gets caught and held in the *matipa* mud. In fact, *umushili na fita* is a colour description rather than a classification and covers various dark soils—peats, &c. of different characteristics. But Bemba say black earth is good for cultivation and is not easily exhausted. Maize grows well on it, but it is considered bad for cassava and sweet potatoes, and not the best for ground-nuts.

Ant-hills (*ifyulu*) are believed to be composed of special soil, and on the flat plain of the Chambesi bed, near Molema, the people, who have no trees to cut for gardens, cultivate almost entirely on the slopes of these small hillocks. Millet is said not to flourish on them, but Kaffir corn and maize grow to a good height.

(4) *Refuse soil—Umufundo.* In selecting ground for their mound cultivation (*mputa*) the Bemba value very highly the sites of deserted villages, which they believe to be particularly fertile. Of any soil which has been enriched either through its own vegetation or by previous cultivation, the turning in of grasses to rot, or the remains of human habitation, they use the word *umufundo*, which seems to describe a particular quality of ripeness or maturity.[1] Of this type of soil the native speaks with a conviction and enthusiasm which contrasts sharply with the hesitating way in which he casts his vote for other types of ground. Contemplating the soil of an *icibolya*, or the high grasses on an ant-hill, he will cry with ardour, '*E mufundo!*' his voice rising high in tone—the usual sign of delighted conviction. He will be endlessly ready to talk about *umufundo*, and to account for its properties. The deserted *mputa* of a previous village are fertile, he says, because of the decaying vegetation on them, and the rich crop of grass which grows in the cleared space now unimpeded by bushes. The natives say that the amount of refuse thrown out daily on the *mputa* makes them fertile, and it must be remembered that the chaff of millet is thrown out every day after the threshing from every house in the village, during a period of three or four years. At Kacienja village I found the headman looking round for some deserted *mputa* on which to make his new village; and around Kasama, where the country is covered with old village sites, the natives anxiously search for signs of the undulations left by disused mounds of earlier

[1] It is also applied to any crop which is beginning to swell and ripen.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

cultivators. The site of the village itself is also believed to provide a very rich soil, because 'many things have lain and rotted there' and because of 'the many footsteps of people passing'.

Most natives will add that human excrement makes soil rich. A specially fine crop of cassava has been explained to me as due to the excrement of children. But here there is a certain amount of contradiction. No Bemba will admit that an adult could ever defaecate on a village bed. This would be strictly counter to etiquette, among a people who have a horror of touching night-soil. Only small children would commit such a breach of good manners, it is maintained, in spite of ocular evidence that the rule is sometimes broken. Hence a native will admit that the fertility of an old village site is partly due to human manure which gives it *umufundo*, but will scold children for using the *mpata* for such purposes. At Canda we Eiya an enraged woman even threatened to call down a curse (*ukulapishya*) on the children who had evidently defaecated on her garden beds. She screamed out, 'You children, you! You go on defaecating on my cassava, you! You make us eat excrement. That is not a good thing, no! I am really going to put a curse on you this time.' It is not surprising, therefore, that in the few places where cattle are kept, the natives object strongly to the idea of using kraal manure.

House sites themselves (*ifitantala*) become a heap of rubble and decaying sticks after the hut walls have been demolished, and a season's rain has fallen on the ruins. After a year, or perhaps two, the raised mound on which the house stood formerly is soft enough to plant. The Bemba sow maize on it or tobacco plants. Whether the surface soil has a high percentage of lime from the plaster walls, or is merely rich in nitrogenous matter from the hut refuse, it is clear to the naked eye that maize flourishes on these *ifitantala*. At Kungu village in April 1934, the plants grown on the deserted house sites were 3 feet higher than those planted elsewhere. This frequent use of the soil of village sites is an important point. Most Europeans in the district look forward to the day when the Bemba will build permanent houses and adopt fixed cultivation. There would be obvious advantages in such a course from many points of view, but on this poor soil, in the absence of cattle manure, the practice of shifting huts, while continuing to use the deserted site, gives the Bemba the richest soil they have for certain crops, such as maize and the various cucurbits.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

Successes and Failures in Soil Selection.

In spite of their rudimentary classification of different types of forest and soil, the Bemba method of land selection seems to provide a fairly wide margin of possible failure, and regular testing of soil by trial and error is part of their traditional routine. Their ritual of founding a village seems to indicate that they themselves consider the choice of a new site an important and even a dangerous decision. Without supernatural aid the headman believes he cannot hope to keep his followers together, but he is also afraid he may have to move his village for economic reasons, i.e. because he has made the wrong selection of site. I have seen communities move their huts for ritual reasons—the death of an important person or the apparent hostility of the spirits; because of some unforeseen disaster such as elephant raids or damage by pigs or monkeys; and because of a wrong choice of soil.[1] There is actually some element of risk in the selection of a site, and it is not surprising that the Bemba follow the village founding ceremony—usually the planting of the first stake (*ukushimpa*) in the headman's new hut—by a hunting ritual (*ukuroa libanda*) to discover from the sex of the first animal killed whether the spirits (*imipashi*) are going to bless the gardens during the year. In many districts, too, a series of subsequent divination tests are carried out with the object of confirming the confidence of the people in their new choice of site. At Kacienja, near Shiwa Ndu, a ritual hunt took place after the building of the first spirit hut of the new village to see if the *imipashi* were satisfied with the choice of the site, and intended to bless the people with food there. The building of a second hut to other *imipashi* was followed by another ritual hunt. Although these rites are not carried out all over the country nowadays, they may be considered as an indication of the native's evident anxiety as to the successful building up of his new community, and his apprehension as to the possibilities of the site he has chosen.

As regards the selection of their gardens the Bemba are also not infallible, in spite of a certain empirical knowledge of the properties of the soil. I noticed that the failure of crops planted in the village mounds was not uncommon, in the first-year beds especially, and secondly, that the natives seemed to expect to proceed along

[1] e.g. April 1933 Canda wa Elya moved on account of raids by wild pigs, and two villages in Nkolemfumu's district (July 1933) because of elephants. Cf. also the case of Munuka village described on p. 284.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 trial and error lines as regards the cultivation of these mounds.
242 In April 1933 at Munuka, near Citimukulu, the headman had about 300 beds of cassava which looked stunted. The villagers had moved out into *imitanda* in the bush to look for new soil. At Shikafyola, near Nkula, I saw, in November 1933, soil turned up by the river and then abandoned. It was found to have lumps of clay inside and said to be too hard to work.[1]

At Kacienja, near Shiwa Dandu, I saw the headman planting some of his mounds with cassava in 1930, and trying each strip in turn apparently, until I visited him again in 1933 and found him still unsuccessful. These are admittedly only isolated observations made during years when the Government was making the planting of cassava compulsory, and when the natives were given no special instructions as to the handling of what was still, to them, a somewhat unfamiliar crop. But there is additional evidence to show that failure is not unexpected when mounds are planted. Natives use a special word, *ukupansa*, which means to 'try the soil'. It is common when building a new village to dig up one hillock or two in the surrounding land and to plant it with different crops. If they bear well, the soil is regularly hoed next year. In November 1933 Chief Nkula told me he had a few *mputa* round the village, and was starting to try the soil by the river for cassava. 'We shall keep on looking for soil on which to plant,' he said.[2] At Kungu
813 village, near Kasama, an enterprising old lady, who was employing
241 two male labourers on the proceeds of the sale of milk, had the
242 whole slope of a hill dug with mounds on which she was putting ground-nuts, beans, maize, and cassava. She called this 'to try at random' (*ukueshya pambilibili*) and told me that as a result of her experiment she was convinced that nothing but sweet potatoes would succeed on that ground. Bemba also frequently plant maize on new mounds where it cannot succeed and hence they are bound to fail in the first year.

As regards the millet gardens failure is rarer, and a man's choice of soil much freer, but I have seen half-cleared gardens abandoned because 'the trees did not seem thick enough where I began to cut', and in March 1934 I noted that two out of the twelve gardens made by the Citimukulu failed completely. Some natives said that
[837] it was because the owner of the garden, one of the chief's wives, had committed adultery, and others that the millet must have been

[1] *Bemba mukati. Kwalihosanganshi.* [2] *Twakulaeshya uko tukalima.*

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

sown on top of a site long abandoned. Apparently they knew some one had once grown a garden here, but they did not know whether the soil would be exhausted. They said, 'We thought we would try.'[1]

I do not know whether such conscious experimentation in soil selection is common among Bantu cultivators. Trial and error methods seem in keeping with many of the temperamental characteristics of the Bemba, as these are expressed in a number of different activities. They appear to the European to act on sudden impulses in many spheres of life.[2] It is not thought at all unusual for a man to dig three or four garden mounds in the bush and then desist, and I have seen four maize plants growing in a clump on the edge of a path with no better explanation than, 'The owner was walking along with seeds in his hand and he said, "Let's plant some here!" and he found they came up well', or, on another occasion, 'I do not know why he hoed there. I expect it came into his heart!' Some of the apparent testing of ground can probably be accounted for by sudden whims of this sort on the part of the cultivator.

But there is no doubt also that lack of precision in the methods of soil selection has also to be reckoned with. A native who can choose quite successfully the patch of bush which is likely to grow most millet, finds it more difficult to plant the five or six necessary crops he has to grow in the limited space he has available on the village beds, more especially as this ground has usually been allotted to him on more or less sociological grounds—his position in a family group, or the site of his hut, for instance. For this reason a certain amount of trial and error is probably a definite characteristic of the agricultural system of the tribe.

Incidence of Knowledge of Soil Selection.

This short description of Bemba methods of land selection shows us that there is a certain body of knowledge on the subject actually existent in the community, in spite of the regular acceptance of trial and error methods, and the fact that these people seem behind other tribes in the territory in this respect. Compare the information given in a primer of tropical agriculture with that extracted, with infinite patience, from an old Bemba in the course of many

[1] *Twati 'katueshye'.*

[2] Cf. The temperamental characteristics of the Bemba described in Chap. I.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

CHAPTER XV

METHODS OF CULTIVATION

•241 AFTER selecting the garden site as carefully as possible, the Bemba are limited to three main methods of cultivation.

(*a*) *The burning of brushwood and branches* on the garden site by which the weeds are destroyed and a finely powdered seed-bed is prepared for the staple millet (the *icitemene* method);

(*b*) *The alternation of different crops* which allows for the use of the former millet garden for four or five years (the *icifunsi* method); and

(*c*) The digging up of soil into mounds (*mputa*) to be used for sowing legumes, maize, and Kaffir corn, and for planting cassava and sweet potatoes—either old soil, or new ground made into mounds by piling up green sods and covering them with earth.

I shall describe these processes in turn and the attitude of the people towards them.

(*a*) *Millet Cultivation* (the *icitemene* method).

Cutting the trees (*ukutema*). All forest-dwelling peoples in tropical zones must evolve some method of clearing bush or jungle land for purposes of cultivation. The trees must be either stumped or cut down, and the thick undergrowth which springs up with each rainy season has to be cut, and this may form one of the hardest of the gardener's tasks. But to the Bemba this process of tree-cutting is more than a method of clearing the bush. It is an essential part of the cultivation of the millet on which the people entirely depend. They cut the bush to get sufficient branches to pile high on top of their gardens, so that when the stacks are fired a thick layer of ash is deposited and the soil underneath is burnt completely. They even cut trees over an area about six times as big as their future garden, in order to get sufficient fuel to burn. It is for this reason that their method of clearing the bush is important.

The Bemba most commonly pollard trees (*ukusanila*), as distinct from stumping or from cutting the trunks down waist-high (*ukubungula*) which is more characteristic of the Bisa and Lala. Thus their millet gardens never look like a flat, cleared field.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

The crop springs up round the base of the lopped trunks, which remain standing till they begin to sprout again. 241

Methods of shifting cultivators often cause the administrator anxiety as they appear to be a wasteful method of using land, and it is true that the *icitemene* system, which has been particularly severely criticized, involves the pollarding of many trees. In the Abercorn district, it was estimated that 21 square miles of wood were cut in order to make 1,346 gardens, or 6½ acres of forest to make 1½ acres of millet garden.[1] The trees grow again in a period variously estimated as 20 to 30 years, but the *icitemene* method certainly necessitates the making of fresh gardens each year in order to produce the essential millet.

However, the European, after 30 or 40 years occupation of the country, has not discovered any better method of producing millet in this particular environment up to the present, or even anything as good.[2] The burning of the ground destroys the weeds and produces a fine friable soil as a seed-bed. It also increases the phosphates and potash in the soil, and turns it slightly alkaline from being slightly acid and makes it more highly saturated with calcium.[3]

It is difficult to find out how long the Bemba have followed their *icitemene* custom, and why they differ from kindred peoples in this respect. Some natives say that 'We learnt *ukutema* here. The Bemba hoed like other people when they were still in Lubaland,' but there is no clear information available as to the tree-cutting methods of the Congo peoples at the present time. Suffice it to say that, however they acquired it, the Bemba consider their own system of clearing the bush as characteristic, and therefore superior to that of other tribes. The method of shearing the trees of their branches is exceedingly skilled. It is the man's task *par excellence* in the whole economic routine. The Bemba are daring climbers. They swarm up each trunk grasping with both hands and pressing with their naked feet, and once up to the branch level, swing themselves up among the boughs, springing or gliding with amazing agility. No tree is considered too high or too dangerous to climb. [173]

[1] *Native Agriculture in the Abercorn District*, U. J. Moffat, and Annual Bulletin of the Dept. of Agriculture, 1932.

[2] Moffat calculates that the average size of a household's garden in the Abercorn district is 3–4 acres and the production of grain per household is 2,800 lbs. Report to the Diet Committee of the N. R. Govt., 1937.

[3] Mr. H. B. Stent's Analysis of the soil of a newly burnt garden. Annual Bulletin of the Dept. of Agriculture, 1933 (p. 48), also U. J. Moffat op. cit.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

The burnt garden. A circular patch of ashes round the blackened trunks of the mutilated trees.

Tree cutting. At the top of the tree the work becomes more and more dangerous.

[facing p. 240]

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 If a trunk is too wide to be swarmed, a narrow pole is cut from the surrounding bush and slanted up against it, or the climber may choose to swing by his arms like a monkey from a convenient bough in a neighbouring tree.

241 412 [326] 313 All Bemba are exceedingly neat and deft with an axe (*isembe*).[1] Each axe-head is fixed at an angle of about 45° through a slit drilled with red-hot iron in a knobbed holder (*umupini*) about 2 feet long. A man never parts with his axe. He carries it everywhere with him swung over his shoulder as he walks.[2] At the beginning of each tree-cutting season the axe-blades are reforged by native smiths, who heat the iron white-hot in a charcoal fire blown with skin bellows, and hammer it out to a new fine cutting edge. During a morning's work the axes are constantly rubbed on stones, often between the cutting of each tree. The blade is thus kept very sharp, and when the shaft is held at the right angle, it will sever a branch from the trunk with two or three deft slashes from alternate sides. I have seen a man clear a good-sized tree of branches in ten minutes in this way, and at the tree-cutting season the bush resounds with the blows of axes and the splintering of wood. Heavy boughs crash as they fall through the undergrowth beneath. At the top of the tree the work becomes more and more dangerous. A man may be left standing on a fork at the summit with one of the vertical stems as yet uncut. He has to clasp it with one hand to steady himself, while with the other he slashes at the trunk he is clinging to. He swings his axe till he hears the warning crack and feels the branch sway. Then he slides his body quick as a flash down the mutilated stump of the tree, yelling in triumph as he hears the bough fall.

241 Every year two or three deaths occur during the tree-cutting. Other men are disabled through falls. The Bemba recognize the work as dangerous, and we have seen that they delay the clearing of the bush until their strength is at its maximum (p. 50); until they have recovered from the effects of a beer-drink (p. 18); or until the weather is warm so that their hands do not slip on the axe-handle.

[326] [1] Axe-heads appear to have been among the few implements which the Bemba smiths knew how to forge. Most axes are still made by native smiths, although more often than not, with European iron, stolen or bought. Only a few are bought at the stores.

[2] As a proverb illustrating parental affection the Bemba say, 'A child is like a little axe. If it hurts you, you just throw it over your shoulder.' *Mwana, kasembe. Nelyo kakukoma, nakakobeka na pa kubea.*

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 788 Sons and nephews of chiefs are not allowed to tree-cut because of the danger, and hence sometimes find themselves almost destitute in old age under modern conditions. Tree-climbing is not an art which can be acquired in later years. Bemba ritual reflects their apprehension over tree-cutting. It will be seen that the prayers said at the beginning of the *ukutema* season, make constant demands for the safety of the men who climb the trees (pp. 366–72).

241 521 Nevertheless, the Bemba particularly pride themselves on this *icitemene* system. They constantly brag of their climbing feats as they talk together round the fire, the morning's trees growing taller and taller in retrospect. 'Look at that man! He is an absolute monkey!'[1] is a high compliment to pay to a cultivator. Young men try to go out together to cut trees (*ukuteme cima*), and when the chief's gardens are being cleared as many as thirty or forty boys sometimes work together on the first day.

The young men seize their axes, and rush whooping up the trees, squabbling as to who should take the highest trunk. They dare each other to incredible feats and fling each other taunts as they climb. Each falling branch is greeted with a special triumph cry. I collected about forty different *ukutema* cries at the cutting of Citimukulu's and Mwamba's gardens in 1933–4. These are formalized boastings like the praise-songs commonly shouted before a Bantu chief. The cutter likens himself to an animal who climbs high, or to a fierce chief who mutilates his subjects, cutting off their limbs like the branches of this tree. A squirrel might be afraid of such a tree, he says, but not he! 'The wind failed to bring down this trunk! But look at me!' Each shout is followed by a prolonged whoop of E-e-eh![2] The noise is deafening for the first half-hour,

[1] *Moneni uyu! Ni kolwe uine uine!*

[2] The cries I collected at Mwamba's village (13.v.33) and near Shiwa Dandu (18.vii. 33) show (*a*) six comparisons between the climbing man and different animals, e.g.

Fulwe tanina—lelo anina ku mukolobondo.—The tortoise does not climb—but to-day he climbs the *mukolobondo* tree. Native comment: This means that a man is afraid to climb, but then he is jealous of his friends who climb so well, and so he begins to learn, and now he can climb, i.e., even the tortoise who cannot climb at all is spurred to efforts against his usual customs.

Kabundi kamunina mfwa. Bacunga balanina no kubwelele.—The lemur climbs to his death, but the night ape climbs and comes back. Native comment: 'See how people who climb take the habits of animals. The *kabundi* is an animal who climbs to the top of a tree even if it falls and is killed, but the *bacunga* runs up a little way and comes back. The man who wants to climb a high tree is not

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 as the great boughs rain down from above. The old men stand
521 beneath and watch indulgently. 'Why does he hang by one hand like that?' I asked of a particularly foolhardy act. 'It is the pride of his youth,' was the answer (*icilumba ca bulumendo*)—a quality which is described with disapproval, but also a kind of wistful admiration by the old. Is it a wonder that a Bemba boy, asked to adopt a less 'wasteful' method of cultivation, replies, 'Yes, but to lop the branches is a kind of play'! (*Ukusaila ni kuangala!*)

241 In a commoner's garden there is, of course, less excitement over the tree-cutting, but the same emotional attitude is shown. No single bough of a tree, however inaccessible, is ever left uncut. Why? 'Because the women would laugh at us when we come back to the village in the evening. Besides, isn't it the custom of the Bemba?', and the speaker then usually starts to laugh at the methods of other tribes, people who stand level on the earth to clear the bush (*ukubungula*) or who cultivate on the ground (*ukulima panshi*). I was once asked anxiously whether Englishmen practised the *icitemene* system in their own country. I gave a long and conscientious description of the merits of English agriculture, but as I spoke I heard one of the young men behind me observe to his friend with a snort of derision 'Hm! Afraid to climb, I suppose!'

Piling the branches (*ukukule fibula*, or *ukuanse fibula*). As he lops the trees on his *icitemene* the gardener should trim the boughs with their withering leaves, cracking the projecting twigs if necessary, so that each branch will lie flat and make an even pile for the

afraid to fall. No! He says if I fall and die, it is no matter, to me! He is the *kubundi*. But other men want to climb a little way and then hurry to the ground again.'

(*b*) Four cries compared the tree-cutter to some legendary chief: e.g. *Tombo Tombolya! Muuma ngoma kumakunkutu!*—'*Tombo Tombolya!* (man's name). You beat the drums with the stumps of your arms!' Native comment: 'They shout thus because they take the arms off the tree and the leaves; that is the same as to mutilate a man. Tombo Tombolya was a man. They cut off his arms. He has to beat the drum with his stumps,' i.e. the trees are to be mutilated by the climber as the chiefs used to mutilate men.

Five cries referred to the food that was to result from the tree-cutting, e.g. *Cinkoyombe! Naleka! Naleka! Naleka!*—The porridge left over! I have left it! I have left it! I have left it! Native comment: 'A man, when he has a big lump of porridge and very little relish, he eats, he eats, and he ends up with a lump of porridge left over without relish to go with it. That is a *cinkoyombe*. They shout like that because it is all a matter of food. They have gone out to cut porridge (*ukuteno bwali*). Where they cut, there they will sow millet—the seed will turn into millet again. That is why they shout like that. Just because it is an affair of food.'

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

burning (*ukusankula*). He must lay them on the ground in some semblance of a row with all the stems pointing in one direction (*ukulashye mikongole mukati*). This will distinguish his branches from those of his neighbours, who make it their business to point their boughs in the other direction. It also eases the work of the women who have later to lift the heavy branches and stack them. A careful man helps his wife in this way—an old man, as an informant usually adds in explanation, taking it for granted that the two terms are synonymous. 'Young men leave the branches as they fall, "*pambilibili*", to use an expressive native term, which we should translate by "all anyhow".'

Next comes the business of stacking the branches. Here the rationale of the *icitemene* system becomes evident. The aim of the native is plainly not to clear the bush of obstructions, but to collect the maximum amount of brushwood to burn. It is the ash which he considers valuable, and the burning of the soil. The woman who piles the branches carries them as high as possible from the ground, so that twigs and leaves should not snap off in transit, and thus waste valuable fuel.

Piling the branches is the hardest work a Bemba woman does, and I have heard the wives of urban natives say that they were afraid to go back to the villages 'where we have to pile branches'. The women lift boughs, often fifteen or twenty feet long, stagger as they balance the length on their heads, adjust themselves to the weight, and start off with the load. All morning they come and go in this way. There is a good deal of skill required in the stacking of branches. They must be laid with their stems to the centre, so that they radiate out in a roughly circular or oval pile. The branches must be piled evenly one on top of the other until they reach a height of about two feet. If any portion of the garden is only lightly covered with boughs, the soil beneath it will be only partly burnt. Natives point to barren patches in a millet field and say the branches were not properly piled on that spot. As the end of the work approaches the woman makes a circular edge to the stack (*umukubililo*) by arranging small branches round in a ring. This is to prevent the fire from spreading too far into the bush, and to provide an extra thick pile of ashes for planting cucumbers and gourds round the edge of the garden.

The work of *ukutema* begins with the cold weather in April or May, and it may last right through till August or September.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 Sometimes a woman works side by side with her husband, piling up branches as he cuts them from the tree. Both may move out into temporary shelters (*imitanda*) built near their gardens, and live there for some weeks together. But the branches are harder to carry when they are heavy with leaves and green sap, and the Bemba reckon that any but a woman who 'loves her husband',[1] i.e. a specially devoted or newly married wife, would prefer to wait till the boughs have dried! The important thing is to finish the work before the end of the hot weather, when the parched bush often bursts into flame, and fires sweep across the gardens before the *ifibula* have been properly stacked. If the work has been delayed into September the man hurries to help his wife, and both carry in the last branches, stacking together in haste. Laggards are sometimes reduced to making several small gardens (*akakumba*, plur. *utukumba*), instead of one or more large ones, piling the boughs where they have fallen from the trees. With the last branch [574] stacked, the family rest. The women begin to enjoy themselves, and go on a round of visits to friends. The country is covered with circular heaps of dried wood waiting through long sultry days for the firing of the bush.

241 685 [643] *Firing the gardens* (*ukuoce fibula*). The firing of the *icitemene* is an exciting and important event in the agricultural year. No one may set light to his branches until a special signal has been given by the chief, otherwise one blazing garden might set the whole bush alight and possibly destroy in a day the unstacked branches of countless gardeners. Heavy damages are claimed by a man whose *ifibula* have been burnt before they were ready. In the old days a native who set fire to the bush, whether accidentally or on purpose, had to give up his own *icitemene* in compensation, and if he had destroyed too much property to be able to make the damage good, he became the chief's slave. If the chief's own gardens were burnt, some say the culprit would have been mutilated or beaten; others that he would have been made to work for the chief. Nowadays financial compensation is asked for, and I have records of cases in which sums from 10*s.* to £3. 10*s.* were demanded as a return for what is, after all, the loss of the whole prospect of harvest for the year.

622 241 643 The chief must give the signal for the firing of the branches as late as possible in the dry season to give the people time to finish the work, but he must not wait till the rains have fallen

[1] *Aletemwa kuli wiba.*

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

and damped the dry wood. Territorial chiefs try to synchronize the burning in one neighbourhood, and I have seen a messenger go from Citimukulu's court to Nkula's village, four days' walk away, announcing the date when the Paramount's garden would be fired. Besides the performance of common ritual, this is the only occasion when the whole Bemba territory is organized as one economic unit.

The signal for the firing is the lighting of the chief's own pile with the correct rites.[1] A bush fire burning fiercely gives a red glow to the sky at night, and I have seen natives living near Nkula's capital stand on their village beds at dusk, watching the colour deepen over the horizon. They talked in excited tones, and shouted to each other in triumph, 'Look over there! He has fired his gardens now! See how red it is now! The gardens of the chief are burning now!' And so the news travels from village to village through the district. In each separate community it is the headman who first sets light to his *ifibula*. At Pambalasa, shortly after my arrival in Bemba country, I saw the sons of the headman and his married daughters file silently into his hut one evening at sun-down. After ten minutes or so they emerged, and the men of the party swung off into the bush single file, head averted, very anxious not to be noticed. The other villagers explained, with the lowered tone and glance with which they usually describe a ritual act, 'They have gone to kindle the branches at the headman's place.' I found that the family had been calling for the blessing of the ancestral spirits inside the hut, and hence had been concerned lest I should see what they were doing. Next day, however, I saw a commoner set fire to his piled-up branches. 'New fire' is needed to set light to the gardens, i.e. fire made with fire-sticks or matches bought at a store. Arrived at his garden, the owner watched the way the wind was blowing, and stood so that it blew away from him. He made a rough torch of bundled up grasses and spat into the air calling on his *imipashi* for blessing. Then he set fire to the torch with a match, and ran round the edge of the wood pile lighting the twigs here and there as he ran. The piled-up branches, dry and brittle from three or four months' exposure to sun, crackled and flamed in a moment, and the children ran wildly round and round, shouting with

[1] Cf. pp. 372–3. Signals for firing the bush are among the orders a chief is specially empowered to give under the 'Native Authorities Ordinance' of 1929.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

● 241 excitement like creatures possessed. The older people stood watching, quietly satisfied. Next morning nothing was left but a circular bed of ashes around the blackened trunks of the mutilated trees. The heavy work of the year was done. The *icitemene* (a thing cut) had become an *ubukula*, a garden, now.

Sowing the millet (*ukutanda male*). After the burning of the gardens nothing remains except to wait for the rains. The main millet crop (*amale yakalamba*) needs to be sown when the ground is soft from the heavy rains in December or January, but the quick-growing millet (*mwangwe*) is planted in the small garden patches earlier, usually in November, while millet sown in a third-year garden (*icifwani*) is known as *nkungwila*, and is scattered over the dry soil before the coming of the first rains. This process is called *ukupamina*.[1]

[462] Either a man or a woman may sow millet, but the owner himself will do so if he is at home. The job is a skilled one, and a man with a high reputation as a sower is often asked to plant the garden of a younger man. An educated native told me that seed sown by a good sower would produce ten baskets of millet as against five from a garden badly sown, but I never tested this statement.

Seeds are carried in a gourd or basket, and the sower first marks out the garden with a stick into strips about a yard wide. This is to ensure that each part of the ground is covered. The sower walks up and down each strip casting the seed broadcast with a flick of the wrist that sends the tiny seeds flying in a fine spray (*ukuposa male*). The woman walks backward behind him throwing up earth over the seed with a forked stick (*ulukoba*) in the case of hot-weather sowing, or scattering it wide with a hoe (*ukutanda*) if the newly burnt garden is being sown. This is a difficult art. A clod is swung sideways shoulder high on the hoe, and then tossed over with a light movement that scatters the earth evenly over the ground, so that the millet seeds lie with a surface covering of soil. After this a careful cultivator will dig a small trench about ten inches deep round the edge of the field to draw off the heavy rain. Some other crops are sown with the millet or before it. Gourd and pumpkin seeds, etc., are planted one by one round the edge of the garden at the beginning of the rains or before them. The perennial Kaffir corn (*sonkwe*) is often sown broadcast over the

[1] This millet is also known as *icikuku*, probably from the wind of that name that blows before the rains.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

garden directly before the millet, a handful or two being scattered widely so that the *sonkwe* heads shoot up here and there among the *amale* about six feet apart. Cassava cuttings are sometimes struck here and there before the millet is sown. The millet seedlings themselves germinate in about six or eight days, and the crop ripens on an average in four to five months.

It will be seen that sowing is quite a skilled process among the Bemba, but it is a quick, light task, for a whole *ubukula* can be sown in about an hour.

Fencing the garden. The advantage of the *icitemene* system is that after sowing there is no more work to be done till harvest. The burning so effectually destroys the weeds that the hoeing and re-hoeing, which is the constant burden of many other Bantu women, is quite unnecessary. Nor do the Bemba spend much time watching their millet against birds, although this is very necessary in the case of Kaffir corn. They merely have to guard their gardens against thieving baboons, as the millet ripens, against elephants, or in certain parts of the country, to fence it against wild pigs or various buck. There is no effective protection against raiding elephants, but in parts of the Chinsali and Mpika districts the natives build watching platforms about ten feet high known as *amapungu*, (sing. *ulupungu*) and sit there all night with muzzle-loading guns. Scarecrows of flapping leaves are sometimes hung up to protect gardens against birds or monkeys, and old men still use their bows and arrows on baboons, although with little effect. 'Monkeys are clever like men', the natives say, but luckily they eat maize rather than the staple millet. Traps made with rope nooses concealed in the ground are sometimes set for haartebeest and other big buck.

In the game or pig districts, fences are built (*kupindilo lubao*). Bemba do not fence for aesthetic reasons, and indeed male labour is usually too scarce to allow them to do so for purely economic purposes. In many areas the garden runs right into the bush, the trailing vines of pumpkins straggling into the *mpanga* with that feckless, 'untidy' look which is characteristic of this type of millet cultivation. But most of the chiefs' gardens are fenced for greater safety, and those of commoners in areas where pig and buck are plentiful. The work is delayed till the last possible moment before the millet is ripening, i.e. in February or March.

To cut a fence for an average-sized *ubukula* is about a month's

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 •
417
291

Harvest. Women reaping the chief's field, Citimukulu, 1934.
A garden fenced against wild animals.

[facing p. 298]

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241
417

work for a man, and it is extremely hard labour. Stout poles of about five feet high and five inches in diameter are trimmed to a point and sunk in the earth about six feet apart. The intervening spaces are filled with horizontal logs, threaded between the uprights, supported on forks, or tied with bark. The result is a fairly impenetrable wall which can only be entered through a rough gate. But even at this cost of labour a fence is not reckoned to last more than two years. The timber rots with rain and is eaten by white ants. Another difficulty is the fact that only a man can make an *ulubao*. Deserted wives try nowadays to set up a makeshift fence, with one cross-bar between flimsy uprights and leafy branches laid aslant it, but it is inefficient and will only last a month. It is one of the grievances of women whose menfolk are absent that they can rarely find a male relative to build them a fence, even if they have been successful in persuading one to cut them a garden. It is a trouble which is, of course, limited to areas where game is plentiful, but in these the women are sometimes reduced to desperation by constant raids on their millet harvest. Near Kasama I watched from a distance a [152] woman running down a hill-side and up the slope opposite to her village, wailing in short staccato cries as she ran. It was like the lamentation at a funeral ceremony, and people stood aside to watch her as she passed. They explained as an apology for such an unusual display of emotion: 'That is a single woman (*umushimbe*). She is alone. The pigs came to her garden last week, and then the other night, and now to-day. And so her heart has become heavy. She has no more food.' Such conduct contrasts sharply with the usual native stoicism in the face of disaster, but it gives some idea of the pitch of despair to which widowed or deserted women are sometimes brought at the present time, for want of male help in economic tasks.

In other parts of the country the people dig pits with mounds between them round the edge of their *ubukula* instead of making a fence. They laugh and say the pits will not keep the pigs off always, but that they are quick to make. They say the animals are puzzled by the holes and begin to run to and fro and to say, '*Yangwe!* I can't get out!' and so they get discouraged and go away. The Lala system of enclosing a number of small gardens within one fence to save labour (*ukuanse lala*) I only heard of once in the Bemba country at Mungalaba, near Mpika.[1]

[1] Information sent me by Mrs. Gore-Browne.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 *Harvesting the millet.* The millet begins to ripen during April, first the quick-growing *mwangwe* or that sown in dry weather (*icikuku*), the self-sown millet known as (*icimbuka*), and then the main crop (*amale yakalamba*) in May or even June. All these cold weather months the people mostly live in grass shelters near their gardens, the women reaping, the men cutting trees for next year's *icitemene*. In a new village there is plenty of timber to cut near by and the move to the *imitanda* seems unnecessary, although the Bemba appear to enjoy it as a kind of holiday. They like, too, to break off from the main community in small family groups. Often a man of standing will use the opportunity to see if he can collect unofficially a large enough following to enable him to set up a village of his own. People worsted in a quarrel, angry, insulted, accused of witchcraft, or in arrears with their tax, retire to *imitanda*, always sure of a plausible explanation of their conduct. In a village which has been built three or four years the gardens may lie far out into the bush at a distance of eight or ten miles, and in this case it is really necessary for the people to camp near them. Otherwise traditional agricultural practice seems to be made an excuse for temporarily leaving the village when desired.

462 412 Women alone do the reaping. They use small knives about four inches long, petal-shaped, and fixed into tiny handles about two inches long. These they grasp in the palm of the hand, and cut off each millet head with the blade, dropping it into a small basket. To choose the right moment to harvest is important. Unripe grain is wasteful; over-ripe blows too much dust into the eyes; damp heads hang down and are hard to cut. An educated native told me that a field sufficient to fill three-quarters of a granary would only provide enough to fill one half if the millet were reaped at the wrong time, but this statement I never tested.

The reaper must stand with the wind behind her, or she will be blinded by dust. She usually walks to the centre of her garden, clears a small space, does magic to give the new food lasting power (*icibyalilo*),[1] and then reaps one basket and puts it out to dry. Later she is usually joined by others and the women work in rows across the field. In a chief's garden as many as twenty women may be working together in this way. Sometimes

[1] Cf. pp. 206–8.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 crops of different kinds are sown together and the reaper must distinguish each apart and return to the field as each ripens.[1]

251 Millet is sometimes stored in temporary granaries (*nkoloso*) out in the fields, and then the grain must be brought home basket by basket to the permanent store in the village—sometimes as much as a week's work. To fill the granary the roof is raised, and the millet tipped in from baskets and then trodden down, and this process brings the cycle of millet cultivation to a close.

241 It will be seen that in this form of cultivation the people's emotions seem entirely centred round one process—a particular method of tree-cutting which is their pride and delight, and closely associated with an elaborate form of ritual to be described later (cf. pp. 367–72). It is this activity which the Government has constantly tried to discourage. Since the early days of the B.S.A. Company, white officials have argued with Bemba chiefs on the subject and the district notebooks at Kasama give reports of visits to the district by governors and other officers, who evidently instructed gatherings of chiefs to forbid the cutting of trees. The answer of the Bemba was, in effect, 'If we don't cut trees, we shan't have any food.' Finally, in 1907, a definite order prohibiting tree-cutting was promulgated, with the inevitable result that the people grew practically no millet, and in at least one district they had to be fed by the Government for fear they should starve. The effort was then abandoned. It is true that these orders were issued to the natives without any suggestion, apparently, as to an alternative method of cultivation. The research at present undertaken may result in the necessary discovery.[2] But it is doubtful whether any system of 'cultivating on the ground' (*ukulima panshi*) will have—at any rate for some years—the glamour of the old, and it seems likely, ironically enough, that those very factors which were formerly important incentives to production—the cultural emphasis on the value of tree-cutting and the religious rites associated with it (cf. Chap. XVII)—will act at the present day as barriers in the way of change.

[1] At Citimukulu's, in an old garden, I saw a woman reap once early in the year to get self-sown millet (*icimbuka*), next to harvest the *mwangwe*, and lastly the *amale yakalamba* itself.

[2] e.g. Mr. Moffat's suggestion as to the possible adaptation of the Mambwe system of throwing grassland into mounds in the cold weather, leaving them fallow during the dry season, and breaking up the hillocks during the rains and scattering the millet seed broadcast over the flattened surface in January and February. op. cit.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

(*b*) *The Cultivation of Subsidiary Crops.*

The subsidiary crops of the Bemba are planted either (*a*) with the staple crop, e.g. cucurbits planted round the edge of an *icitemene* garden, or perennial Kaffir corn sown broadcast with it sometimes; (*b*) on an old burnt garden (*icifuuna*) after the millet has been reaped off it; (*c*) on the beds round the village (*mputa*). 241

Ground-nuts (*mbalala*). Ground-nuts, the crop that comes next in importance to millet, are usually sown in an old burnt garden, after the straw of the millet of the previous year has been burnt (*ukusoa mpimbili*) in the dry weather, October or November. The soil is then hoed up very roughly. The seeds are sown in the early rains (November–December), and can be planted if necessary up till the mid-rains (January). To plant them the sower makes a series of dents in the soil with a hoe (about 18 inches apart) while another follows and drops the seeds in one at a time to a depth of 3–5 inches. The earth is then trodden in with the feet. A man and his wife often hoe in this way, side by side, while a child follows and drops in the seed, or at a chief's court a party of *umulasa* workers go out together planting the field in groups of ten to twenty. I have also seen a woman make holes all over the field, then drop in the seed, but there is no attempt to sow the seed in straight lines. Occasionally ground-nuts are sown in the village beds after scattering the mounds dug there for previous crops (*ukupasa*), but the yield is not reckoned so good by this method. 242

If the field is overgrown with weeds it will be cleared in February.. Otherwise there is no work till the harvest in May. Then the women go out to pull up the ground-nuts (*ukufuka mbalala*). They work in threes and fours, each catching hold of a plant with her left hand and hoeing up the roots with her right. Then they sit down in front of a pile of plants and shake the roots free of earth and remove the nuts. The digging and carrying of the ground-nuts is quite a serious task and may take the women a week or two. Temporary granaries are sometimes made in the fields to store the nuts until they can be removed to the village. Nuts overlooked at harvest spring up the next season, and these self-sown nuts (*shya makoka*) are considered quite an important source of food. Ground-nuts are an old crop, and there are innumerable medicines mixed with the seeds at sowing (*icibyalilo*). No first-fruit rites are performed in this case, but a queer usage survives by

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

244 which a man can ask his friend for a handful from a new basket of nuts without possibility of refusal. This is known as *ukushikilo matwe* (to take the taboo off the head). I cannot explain the custom.

• 241 *Other crops—Mound-cultivation.* Most other crops the Bemba plants on mounds (*mputa*) raised above the ground. These he makes either in the old burnt gardens, after three years use usually, or else in the beds round the village. The mounds are irregularly spaced all over a garden.[1] Of 10 measured *mputa* the average height when new was 2 feet, the diameter across the base 6½ feet. Those intended for cassava are usually built about 3 feet high because of the length of the root of the crop. When the Bemba use the word *ukulima* (to hoe) it is usually mound-making they mean. On mounds the Bemba plants roots such as cassava and sweet potatoes; legumes, i.e. beans, peas, cow-peas; cucurbits; and grains, i.e. maize and Kaffir corn. He thinks legumes and root crops are better suited to mound-cultivation because of their habit of growth. He says the trailing vines of the legumes spread over the surface of the *mputa*, and the cassava roots strike down into the newly dug soil. He explains, too, that *mputa* are raised out of the damp in the wet weather and that the roots of the plants are thus kept from rotting. But he also uses the method as a means of renewing the soil, and it does, in fact, expose a new surface of earth to the air. When the soil is old, he says, you must dig it up into *mputa*, and it is part of the regular cycle of cultivation in the old burnt gardens to dig up mounds in the third or fourth year.

Bemba make *mputa* of two types, from turf and from old soil. Round a new village they cut clods of turf with the hoe (*ukusapika*) and pile up the tussocks of grass in heaps. Earth is then flung on top to a depth of a few inches (*ukushikila*). This is heavy work and should be done by men. New *mputa* of this type are known as *mputa shya nsokwela* (mounds of the foundation, i.e. of a village). They may be made in the dry weather (May-September) and allowed to stand while the vegetation rots inside. The value of decaying vegetation is apparently recognized by some gardeners. One explained to me that richness (*umufundo*) was obtained in this way because 'things have rotted inside' (*ifintu fyabola mukati*).

[171] [1] Daryll Forde states that among the Yakö, a Semi-Bantu people on the Cross River, S. Nigeria, these mounds are so evenly spaced by the natives by eye that he was able to estimate the size of a field by counting them. op. cit., p. 31. This is not so among the Bemba.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

On the other hand, most Bemba leave the making of their new *mputa*, in characteristic fashion, to the last moment, and dig up the mounds in December, January, or February, when the ground is soft and easy to work. In this case they plant beans or cassava on the surface soil of the turf heap next day. In fact some young men seemed quite unaware that the soil became richer by being left to stand, and merely said they piled up the turf into mounds because they did not know what else to do with it.

Any legume or root crop can be planted on these grass mounds. I never saw maize, Kaffir corn, or cucurbits sown in this way and informants told me that the soil was not 'rich' enough for them.[1]

The second type of *mputa* is made on the old soil, either of burnt gardens or village beds, which the natives believe they can renew by deep digging. In fact after the first year or two of cultivation their only means of maintaining the fertility of *ifyfwani* or village *mputa* is to make and remake the mounds, and this they will do for several years. The soil may be re-dug with varying degrees of thoroughness—expressed by the Bemba with their rich vocabulary of reversive and intensive verbs by such terms as *ukufukula*, to toss up the earth; *ukufukulula*, a more complete process, to remake the mound entirely; *ukupilibula*, to turn the soil upside down; *ukupilibwila*, to turn it completely upside down. The most thorough and efficient re-digging of the village beds is to remake the *mputa* entirely (*ukutukulula* or *ukufukulula*), some time in the middle of the rains, so that a hump appears where a hollow had been before. This is hard work delayed as long as possible—usually three or four years after the founding of the village—and properly requiring male labour.[2]

A less drastic method, usually followed during the second year of cultivation, or where the owner is a widow or a deserted wife, is to halve the *mputa* and make a series of smaller mounds about 1½ feet high between the old. This process, known as *ukupetula*, allows the native to sow crops for another year with a chance of success, although he will admit that it is not so good as the complete remaking of the mound. He may also take advantage of his

[1] Mr. C. G. Trapnell tells me he has seen Bemba 'try' new mounds with maize, Kaffir corn and cucurbits in other parts of the country.

[2] In five villages I visited (Moleme, Citikafula, Kasaka, Mubanga, Kacienja) this complete process had been undertaken after three years' cultivation: in one village which had good soil (Kampamba) after four years, and in another with unusually good red loam soil (Nkula) after five years.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 favourite device of burning the ground, especially where Kaffir corn or maize have been grown the previous year. In this case he strips off the straw left standing on the *mputa* during the hot season (September), piles it in the hollows between the mounds, sets fire to it, and leaves the ashes for the first rains to fall. Then he covers the spot with a small heap of earth and thus makes tiny *mputa* between the old ones. A clever cultivator was enthusiastic about this method and said, 'If you burn the soil and make small *mputa* on top and the rain has fallen on the ashes, that gives *umufundo*. You can plant anything on top then, maize or sorghum or beans, everything!' Thus starting from a general idea that subsidiary crops are better planted on mounds, and that old soil can be renewed by exposing a new surface to the air, there is every variety of mound-making practised by the Bemba, from the thorough redigging every two or three years to the semi-renewal of the mounds done annually.

[42] Hoeing is considered hard and unromantic work by the Bemba, quite unlike millet cultivation. Both sexes hoe, and the people go out in two's or three's to dig mounds; a husband and wife together or two or three related women. Occasionally a man will get up a working party to be rewarded with beer, and will thus put a big stretch of ground under cultivation. But I never heard the slightest interest expressed in mound-making, and older men take it for granted that the young people will not bother with it. '*Tu-mputa twa ba'umendo*' ('The little mounds of young men'), they comment in passing small and hurriedly made *mputa*. This attitude to mound-cultivation has important results on the food produced. To dig new mounds for village beds at the foundation of a settlement is necessary, and it is an almost invariable practice to dig up an old burnt garden into *mputa* after the last crop of millet has been got from it. But, in the succeeding years, the digging and redigging of the beds, to get the best results from the soil, depends on the individual's energy and determination, and, as the main hoeing season falls during the rainy months, i.e. the time when food is shortest, the work is often carelessly done or left till another year. '*Ubunaŋani bwaisa*' ('Laziness fell on us') was a comment made.

Planting. Women usually keep the seeds for their subsidiary crops mixed in one gourd in what seemed to me a rather haphazard manner, and many natives denied that they selected seeds with any care to secure good strains. However, after questioning

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

a number of cultivators, I came to the conclusion that all natives distinguish the slow- from the quick-growing millet (*mwangwe*), the perennial Kaffir corn (*sonkwe*) from the more common annual (*amasaka*), and the quick-growing maize (*kalimimwa*) from the slow-growing (*punga*). These strains they keep apart and sow separately. The long-vined cow-pea (*ifilanda fya nkula*) is also distinguished from the shorter (*ifilanda fya nceshya*) or another variety with small pods (*ifilanda fya bununlala*). Pumpkin and gourd seeds are actually selected from plants that bore well the previous year, especially in the case of the gourds used to hollow out for beer-gourds, dippers, or oil flasks. But, for the rest, though older natives distinguish about twenty different kinds of millet, according to the colour or size of the seed, and many varieties of maize, Kaffir corn, and legumes, they do not seem to select one type of seed rather than another when planting their gardens.

Women generally plant the subsidiary crops, especially those on the *mputa*. This is not a long operation, since the aim of the gardener is to sow a succession of vegetables, and therefore she plants her mounds from week to week throughout the sowing season.

The art of sowing consists in the careful planting of seeds on the mounds to suit their habit of growth and time of ripening. The Bemba reckon to grow at least two different vegetables on each *mputa*. Thus, pumpkins are often planted round the base of a mound on the top of which maize or Kaffir corn has been sown. Their long vines trail between the *mputa* while the grain crop shoots up on top. Sweet potatoes are also paired with Kaffir corn, since the former are dug up in October and the mounds can then be left to 'get rich' (*ukufunda*) till the latter is sown in December. cassava and sweet potatoes make another pair, and these are planted together. The cuttings of cassava are stuck vertically on top, and the sweet potatoes at an angle on the sides. Beans and peas are also commonly grown with Kaffir corn or maize. The long-vined cow-pea (*ifilanda fya nkula*) is very carefully placed on the top of a mound because of its growth.[1]

Natives are convinced of the value of this system of mixed planting. Near Kasama, a man who had filled his *mputa* with cassava only was criticized as being lazy, although the mounds

[1] It may even be scattered broadcast on a *icifwami* garden with small mounds dug in between or mixed with Kaffir corn and sown in the same fashion.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 were pretty well covered with cuttings after the fashion of the Bisa, some of whom grow cassava as their staple crop and in Cilubi island seemed to produce much finer plants by growing it alone. Several natives have complained to me that sweet potatoes injure other crops by their spreading habit. 'They creep about and steal the food of the beans, and the peas and the Kaffir corn', but they nevertheless continue to plant them with other seeds, 'because we want to have a lot of food'. Mixed cropping, as practised by the African cultivator, is believed to have many advantages under primitive conditions, on the grounds that it prevents the complete exhaustion of the soil by one crop, guards against erosion, and often provides a low-growing crop with shade from a higher one. But among the Bemba the fear of being without a necessary food sometimes leads unskilful cultivators to stuff their *mputa* so full of different seeds that the plants jostle each other for room (cf. p. 324).

In any case, the placing of seeds is obviously important with such a system, and the women plant one or, at the most, two at a time, making a cleft of about four inches deep in the soil with a hoe and dropping in the seed. This process is known as *ukubyala*, as distinct from the broadcast sowing of millet (*ukutanda*). I have seen Kaffir-corn seeds that came up too thickly transplanted (*ukwaukula*), in one village, but many natives are loath to thin out seedlings either of Kaffir corn or pumpkins. A gardener gazing at a mound crowded with seedlings said, 'Yes, those plants are pressing against each other. Each will steal the food of the other. But are we to throw them away? Would not that be a slight to the spirits (*ukutuke mipashi*)? Is it not they who gave us the food? And are we to throw it away? That is what they do at the mission school. They plant beans and then dig them into the soil. That is bad what they do there.' Here religious belief definitely affects agricultural practice.

The sowing season lasts, in effect, from September, or even earlier, to February. Some crops can be sown in the dry weather in the months just preceding the rains (*ukupamina*). Others are planted in the early rains—November or early December—the time known by the natives as *ukupokwa kwa mfula*. The heavier rain falls in the mid-season—December and early January—and the last sowings are made at the end of the rains—February and March—the two months known as *ukulekelesha kwa mfula*. Dry-weather sowing

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

is only practised in old gardens when the soil has been softened by pulling up some previous crop.[1] Natives say that the seeds get warm in the earth, while it is still 'hot', and these sowings ripen the earliest. Cucurbits, maize, and legumes, except peas, may be planted in this way. All crops can be sown in the early rains, except the main millet supply (*amale yakalamba*), and in the mid-rains everything except maize, which is said to be injured by the heavy fall then. Only legumes can be sown advantageously at the end of the rains, and then they are planted for leaf-relish only, since the pods, ripening late in the year, are considered to be too small and hard to be of much use. Double crops are only obtained in the case of the cow-peas.

Cassava and sweet potatoes are propagated from cuttings at any time during the rains. Technically speaking, the men plant the cassava and women the sweet potatoes, although this division of work is not very strictly kept. The cassava cuttings are taken carefully, the cut being made just below a nodule of the stalk. Cassava, which has seen two or three years' rains, is sufficiently mature for this purpose, and occasionally bundles of stalks are roughly put into the ground in October or November, to be used later for cuttings when required. Sweet potatoes seem to be shoved in anyhow, leaves, root, or stalk—'Sweet potatoes? They just like to grow! You can stick in any part—it is their habit to grow (*amatongo mabo*).' Sweet potatoes are ready for eating after the wet weather is over, but cassava is at its best after the second or third season's rain.

Thus it will be clear that the planning of successive sowings is a matter of some importance, and the Bemba sometimes use considerable ingenuity in arranging early and late planting and the use of quick- and slow-maturing varieties of seed. At one village,[2] which had at the time plenty of male and female labour, I saw the village beds laid out in an orderly series, with beans and peas at every different stage: just germinated; two inches above the ground; eight inches above it; beginning to clamber and beginning to ripen; but very often the work was not so successfully organized, and the different owners' gardens looked as though each woman had sown when and what she could, according to whether her

[1] e.g. the millet sown as a third-year crop after the ground-nuts of the previous year have been rooted up. Cf. p. 217.

[2] Mutaka, near Citimukulu. April 1933.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

• 241 husband had been able to dig for her, whether she had been given sufficient seed, and whether she had thought ahead.[1]

The following table shows the succession of the different crops:

[221]

	Sown	*Reaped*
Millet (main crop, *amale ya-kulowaba*)	Mid-rains (Dec.–Jan.)	May–July
(quick-growing, *amangwa*)	Early rains (Nov.)	April
(old burnt garden crop, '*akangwila*')	Pre-rains (Sept.)	April
Kaffir corn (main gardens)	Mid-rains (Dec.–Jan.)	July and Aug.
(village beds)	Early rains (Nov.)	July
Maize (main gardens)	Pre-rains (Sept.–Oct.)	Feb.
(village beds)	Early rains (Nov.)	March
Ground-nuts (main gardens)	Early rains (Nov.–Dec.)	May
	Late rains (Jan.)	June
Ground-beans (main gardens)	Early rains (Nov.–Dec.)	March–April
Cucurbits (main gardens)	Pre-rains (Sept.–Oct.)	Jan.
(village beds)	Mid-rains (Dec.)	Feb.
Beans | (main gardens and	Pre-rains (Sept.–Oct.)	Feb.
Cow-peas | village beds)	Early rains (Nov.)	March
	Mid-rains (Dec.–Jan.)	April
	Late rains (Feb.–March)	May–June

Weeding. The Bemba only weed or hoe from sheer necessity and not for appearance sake. On the *ifitimese* neither is necessary during the first year of cultivation because the burning has destroyed the weeds. In the next year ground-nuts should be hoed if overgrown, and cassava beds should, if possible, be dug over in March or April. This is rarely done, except in chiefs' gardens. It seems likely that the Bemba never hoed their gardens constantly as some Bantu peoples do, but the number of *ifyfwasi* that now seem quite overgrown with weeds is probably due to the shortage of male labour. *Mputa* should, technically speaking, be weeded. All over the second- and third-year mounds high grasses spring up during

[1] Another example of intelligent planning was seen in a new village of keen cultivators (Cikwe) in May 1933. Here one owner had seventy-five *mputa* of cassava and potatoes, planted in the early rains and now ripe for use, and three hundred and forty being planted for future use. He also had a hundred and forty-five *mputa* of cow-peas ripe then, thirty-seven of Kaffir corn, and forty-six of ground-nuts. Another owner had a hundred and twelve *mputa* of cassava and potatoes from the beginning of the rains, a hundred and seventy-four recently planted, and eighty-six dug up to be left for cultivation with the succeeding rains, forty-eight *mputa* of cow-peas ripe at the moment, and ten recently sown for leaf-relish later on, and a hundred and one *mputa* of Kaffir corn, while the three other important householders had about the same proportion.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

246

the rains. In any case, these mounds could never attain the demure appearance of an English vegetable bed sown with a single crop planted in fixed lines, but in the wet weather they become a riot of vegetation of every sort. Grasses, cassava, and maize shoot up together, and pumpkin vines trail across the paths. The Bemba view the sight with calm, and even appreciation. 'Look at the weeds', I exclaimed in involuntary criticism on one occasion. 'Yes,' said my informant, 'that is fine soil! Look at the Kaffir corn coming up too.' The people argue that it is no use attempting to weed during the rains, since more weeds will only spring up.

I do not know how far the yield of the village beds would be improved by weeding. Some youths were quite ready to point out the greater height of the cassava in a neighbour's bed as due to his assiduity in weeding. Others distinguish between different kinds of grass, some harmful and some not, or between different crops, some of which, e.g. cassava, with its two or three years' growth, need hoeing, and others, such as maize, which they maintain do not. At chiefs' villages where labour is more plentiful, Kaffir corn is hoed once, in March or April, and is sometimes given an extra hoeing in January. Then the straw is pulled up and burnt (*ukuoce mpimbili*) in October and November. Cassava beds are dug over in March or April. But commoners do not reach such a high standard at the present day, and the young men tend to do the minimum of hoeing, at the last moment, when the ground has grown hard. In fact, some men, particularly those newly returned from the mines, or working in Kasama, declared to me confidently that the whole tiresome business was superfluous—a statement that I took as a sign of the times, since their elders shrugged their shoulders and commented, 'The laziness of youth.'

Harvest. Except in the case of Kaffir corn (*amasaka*) and groundnuts there is no regular harvest season for the subsidiary crops. At a chief's village, where much of the former is grown, tribute labourers go out to reap the corn in June or July. They cut the stalks down (*ukuteta*) and then cut off the clusters of grain about six inches below the head (*ukukobola*) and carry these back in baskets. But in many areas the ordinary householder grows so little Kaffir corn now that she picks two or three heads at a time as they ripen, dries them on the roof of a hut, and grinds them at once into flour, usually mixed with millet. The perennial variety (*isaku*) is usually so treated.

The other crops of maize, gourds, and legumes are gathered as

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 they ripen. There is no general harvest of the crops and the process is known as *ukusaba* (to gather) rather than *ukusepa*, reserved for the reaping of the millet proper. In fact, all these subsidiary crops are known as *ifyasabasaba*, i.e. things to be gathered, not reaped. Each pumpkin or cucumber, whether grown in the millet gardens or on the village beds, is watched with loving care as it ripens, and its shape and size is constantly described and discussed. Women visit their distant gardens every other day to pick each vegetable as it reaches perfection, and this coming and going between village and garden makes quite heavy work at the end of the rains. Maize is also picked cob by cob, as it ripens, since the Bemba do not store this food, but eat it fresh. They do not even enjoy eating it half a day old. There is a curious belief that the cobs should not be stripped off the stalk inside a *icifwasi* garden, but the whole stem itself cut down and carried out—'It is a custom of respect to the maize' (*umusango wa mucinshi*). Legume pods are gathered as they are needed, as an English woman picks peas from her vegetable garden, except for the pods or leaves which require to be stored (cf. Chap. V). Root crops are dug up as required.

Additional Methods of Cultivation. Besides their new and old burnt gardens and their village beds, the Bemba know several subsidiary methods of cultivation which they practise at certain times and in particular localities. These include (i) Livingstone potato gardens (*ifibundu*), (ii) river-side gardens for dry-weather cultivation (*icibela*).

244 (i) *Ifibundu.* The Livingstone potato is only grown in certain areas, in spite of being one of the oldest crops. I found it planted most extensively near Citimukulu's village, whether because the soil was considered specially suitable, or because old customs linger in this area, I do not know. The *ifibundu* beds are prepared in a more elaborate manner than any other Bemba garden-bed. Long grasses are first pulled up (*ukuseba*), and then the grass tussocks are broken up with a hoe (*ukukontaula*). After this comes the characteristic *ifibundu* process known as *ukushima*, which means ordinary hoeing followed by prodding the ground with the apex of the hoe to break it up, and scattering it until it forms a fine soil. Such beds are prepared in May or June, after the rains are over, but before the ground has become too hard. An improvident gardener may wait till later, but he will give himself harder work. The *munibu* are propagated by two methods—sowing the potato itself

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

and striking cuttings from the plant. The seed potatoes are planted half at a time, and begin to sprout when the weather gets warm. They are not ripe for eating till the following rains, when the gardeners dig them up from time to time to test them.

The potatoes grown from cuttings are planted in September. About that time the natives cut off the leaves and stalks of the *mumbu* level with the ground, for fear that the potatoes already formed in the soil should begin to sprout again with the rains. But the shoots should not be thrown away. 'They will swell into roots like a pumpkin does, and will begin to run out into the ground.' The rest of the *ifibundu* bed, left vacant for the purpose, is therefore re-planted with cuttings and the potatoes are ready to be dug in the subsequent May.

Natives seem to consider that there is something romantic about the cultivation of *mumbu* and that it is 'distinguished' to have an *ifibundu* bed. Besides this, the potatoes ripen at the end of the rains, i.e. the time when supplies are shortest.

(ii) *Icibela*. These are dry-weather gardens made near river beds. I saw them made among the mixed Bemba-Bisa peoples near Shiwa Dandu, but not elsewhere. The cultivator digs up the turf into mounds and then leaves these upturned sods to dry. Then he sets fire to this dried grass and covers each mound with earth. These gardens may be planted as early as August or September, as the soil is sufficiently damp, and by this means different subsidiary crops are secured very early in the year.

Attitude to different crops. When the Bemba grow millet they are not only producing their favourite food and working at their favourite task, but they are engaged on a whole series of activities which have rich traditional and emotional associations for them. None of the subsidiary crops arouse such interest, but each has its own value to the native, based on its historical associations, its importance as food, its magic properties, or the time and care it takes to grow. All these attitudes affect Bemba food production.

For instance, ground-nuts are a favourite food and grown on a sufficient scale to make the cycle of planting and harvest part of the regular routine of the year. The people seemed to take pleasure in talking of ground-nut cultivation and of the state of the crop. They use 'medicine' to grow it, as has been stated, but otherwise little ritual surrounds its use. Kaffir corn, on the other hand,

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 is very much liked as a food, but it does not grow well on all soils, and needs a good deal of labour to protect it from birds. Therefore it is less and less planted. Nevertheless, it is still the crop which has the greatest ritual importance, and there is something almost romantic in the natives' attitude to it. People stop at a field where it is grown and smile and say, 'How lucky the owner is to have such [643] good soil.' They describe *amasaka* districts with appreciation. It is associated with chieftainship, since Kaffir corn is necessary for much of the tribal ritual, and the greater supply of labour at the capital makes it easier to grow it. The perennial Kaffir corn (*sonkwe*) is easier to grow since it is not attacked by birds, but many Bemba do not rate its flour very highly. Both types are 241 doctored before sowing in some families (*icibyalilo*), and must 834 be protected from contact with sex. In the old days a man had 761 to purify himself after intercourse and wait three days before sowing the Kaffir corn. The crop is also considered to be injured by contact with death. 'People say: A hot person (i.e. a person who has not been ritually purified after a sex act) should not spoil the Kaffir corn; and a new death, it must not spoil it either.'[1] In the old days Kaffir-corn seeds were rubbed with a piece of dough, which had been made with water heated in the tiny marriage pot used to purify a chief mourner after the act of ritual intercourse with which he removed the taint of death from his family or village. This dough was thought to protect the seeds, as it contained elements of heat from contact with sex, and of cold from contact with death, and hence inoculated the crops against both dangers. 241 Many of these beliefs are dying now, but the tribal sacrifices of the Bemba still coincide with its first-fruit ceremony (cf. pp. 374–8); its flour is used to scatter over the dead body of a chief, and his corpse cannot be buried until the cycle of the Kaffir-corn harvest is at an end. The flour is used to fill the sacred basket in the chief's relic [881] hut. At one point in the girl's initiation ceremonies she lays her head on *amasaka* seeds. For all these reasons, the Bemba grow Kaffir corn whenever they can, and Citimukulu plants it definitely for ceremonial purposes. He went out himself with his sons to reap it during my visit and called me specially to watch the process. He kept saying it was 'good' (*cawama*) for a chief to grow Kaffir corn.

Two other old crops of the Bemba are handled ritually, but are

[1] *Baleti bukabe teti buonaule masaka: ne mfwa mbishi tekuti ionaule masaka.*

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

no longer at all important as food. These are the *mumbu* potato just described and the little cucumbers, *amankolobwe*. First-fruit rites and sowing ceremonies are still performed for both, although they are not grown universally. First-fruit rites are done in the case of maize, but its cultivation is evidently not considered as interesting, by a long way, as that of the Kaffir corn. The cycle of its planting and harvest is not an important rhythm in the agricultural year, and the Bemba do not value the crop as food very highly, as we saw. It is just a subsidiary crop and nothing more.

Legumes are a necessary relish, but I never heard of their cultivation described with special interest, and since these are usually planted a few at a time, like garden vegetables in Europe, there is no such thing as a bean or pea harvest as a communal activity. The cow-pea is the legume crop with the greatest historic interest. First-fruits and sowing ceremonies are performed for it, and a sauce made of *ililanda* is used to pour daily over the chief's dead body while it is being dried and preserved. The common *icilemba* bean is the most used as food, and these seeds, from their variegated colours, are used to decorate the clay images used in the girls' initiation ceremony. Pumpkins and gourds are an old Bantu crop, and among the Bemba, as elsewhere, rites of first-fruits and sowing are performed over them. Women speak of their cucurbit crops with special interest. They watch the gourds form, laugh and talk about their different shapes, and carry curiously formed vegetables to their friends to see. These plants ripen, too, in the hunger season, and hence their coming is hailed with delight.

Cassava and sweet potatoes are the easiest of all crops to grow and should appeal to the Bemba on that account, but the people apparently despise them as food (cf. pp. 52–3), however unjustifiably. Cassava is associated with no sort of ritual whatsoever. The natives who were encouraged to grow these root crops in increased quantities during the locust raids apparently diminished their planting after Government pressure ceased.

(*c*) *The Sequence of Crops.*

The next point of interest for discussion is the length of time the Bemba are able to use their land. It is evident at once that they have no conception that the fertility of a garden can be more or less permanently maintained by means of a fixed rotation of crops,

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 242 whether or not they could succeed in doing so on these soils. They use their old millet gardens (*ififwani*) for as many seasons as they can, because they believe that the soil of a garden that has once been thoroughly burnt gives a higher yield than that prepared in any other way,[1] e.g. by hoeing into mounds (cf. pp. 302–4). In these gardens they plant a sequence of crops, generally according to very sound principles. But after four or five years it no longer pays them to go on cultivating the same *icifwani*. Its yield has fallen rapidly; it requires digging up into mounds each year with a good deal of labour; and its fence has probably rotted away and requires renewing. Moreover, since each gardener is clearing a new patch of ground in the bush each year for his millet, he soon has more *ififwani* available than he has the labour to cultivate,[2] and hence he allows the oldest field to relapse into forest again.

It is not strictly accurate to call such a four- or five-year sequence of crops a rotation, since the series is not repeated and the motive of the native in alternating different crops is quite different from that of the European farmer. The latter tries to maintain the fertility of his land by planting the second year a crop that restores to the soil some particular constituent that has been exhausted in the first, that makes different demands on the soil from the preceding one, or that has some other improving effect on the soil. The Bemba farmer is not at all concerned with preserving the resources of the land, of which he has an ample supply. He merely wants to get as much food as possible from the ground with the least labour. As a purely subsistence farmer, he must plant every year each of the crops he needs to live on, even if he knows that the yield of any one may be low in the particular circumstances, and his small force of labour often makes the question of the work involved in each operation the decisive factor. Thus, though clever cultivators actually know a certain amount about the properties of the soil, and though the traditional crop sequences sometimes seem to conform to our own scientific principles, yet the practical exigencies of the moment—the desire for a particular crop or the absence of male labour—are often the predominating factor. In fact, it is motives of this kind that seem

[1] Natives say that cassava roots grown in an old burnt garden are bigger than those on their village mound gardens, and also that the maize and Kaffir corn grow taller.

[2] Cf. tables opposite: also p. 397.

Showing Gardens Cultivated by Two Owners during Residence on One Village Site
(Kasaka, near Shiwa N'gandu)

FAMILY A: KASAKA

	Bukula 1	*Kakumba 1*	*Bukula 2*	*Kakumba 2*	*Kakumba 3*	*Bukula 3*	*Kakumba 4*	*Kakumba 5*		*Kakumba 6*	*Kakumba 7*	*Bukula 5*	*Kakumba 8*
1928	Millet	Millet (*mwangwe*)	..	..	..	..	..			..	..	..	..
1929	Ground-nuts	Peas	Millet	Millet (*mwangwe*)	Millet (*mwangwe*)	..	..	..	..	..	..	..	..
1930	Millet (*mwangwe*)	Peas	Ground-nuts	Peas	Millet(self-sown)	Millet	Millet (*mwangwe*)	Millet (*mwangwe*)	..	..	..	..	..
1931	Beans	Abandoned	Millet (*mwangwe*)	Gives to son-in-law	Beans	Ground-nuts	Peas	Peas	Millet	Millet (*mwangwe*)	Millet (*mwangwe*)	..	..
1932	Pigs destroy	Abandoned	Beans	Abandoned	..	Millet (*mwangwe*)	Millet(self-sown)	Millet(self-sown)	..	..	..	Millet	Millet (*mwangwe*)
1933	Pigs destroy	Abandoned	Potatoes	Abandoned	..	Abandoned	Monkeys destroy		Millet	Millet	..	Peas	Gives to son-in-law Millet

FAMILY C: CABELUKA

	Bukula 1	*Bukula 2*	*Bukula 3*	*Bukula 4*	*Village Beds*
1929	Millet	..	..	..	..
1930	Ground-nuts	Millet	..	..	..
1931	Millet (*mwangwe*)	Ground-nuts	Millet	..	..
1932	Beans	Millet (*mwangwe*)	Ground-nuts	Millet	..
1933	Monkeys destroy	Beans	Millet (*mwangwe*)	Monkeys destroy	..

Bukula = New-burnt garden.
Nkungwila = Millet sown in 2nd or 3rd year alternation before rains.

It will be seen that each owner makes a new millet garden each year. In 1928 their main crops come from *Bukula* 1 and in 1929 from *Bukula* 2, and so on till 1933. After two years each gets also a smaller supply of millet from the third year alternation after ground-nuts, or peas, i.e. from *Bukula* 1 in 1930, *Bukula* 2 in 1931, &c., in the case of Family A quick-growing millet from the owner's small accessory burnt gardens, Family C having insufficient male labour to cut such additional gardens. Obviously each owner has an increasing number of gardens under cultivation each successive year, till it comes to the point when he cannot plant the lot for want of labour, e.g. Kasaka sowed his smaller gardens, *Kakumba* 1, 4, and 5, for three years only, and *Kakumba* 2 for two years, and *Kakumba* 6 and 7 he left fallow for a year. In 1931 and 1933 he lent small gardens to his son-in-law. The main gardens both he and Cabeluka planted four years running unless prevented by the raids of monkeys or wild pigs. The table also explains why a woman deserted by her husband has a supply of millet in the third year, but none after that.

Kakumba = Small accessory burnt garden.
Mwangwe = Quick-growing millet.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5
241
242

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 242 to weigh with the Bemba. For instance, it is their usual practice to plant a legume after a grain crop (the usual millet, ground-nut, millet, beans sequence described below. This principle is, in effect, a rotation. But most Bemba do not follow this sequence for the same reason as the European farmer. Some of them claim that the second crop actually improves the soil and increases its *umufundo* or richness, but others merely say that they plant the legume because they cannot sow millet—their first need—two years running, except in special circumstances. I heard one educated native say that he had lent his old millet garden to a friend in his absence 'so that he can plant ground-nuts there and I shall come back and find the soil enriched'. But others explained the practice by saying that ground-nuts grow specially well in a newly burnt garden, or that they should be planted after millet, as they are a low-growing crop and hence self-grown millet from the year before can spring up in between and be reaped as well. More commonly still, informants answered me, 'I plant ground-nuts because a man with children must have many ground-nuts. When they cry for food in the hunger months, the mother can roast them a handful of nuts instead of porridge.' Or simply, 'because I want ground-nuts as well as millet'. When each family is entirely dependent on what it grows for what it eats, and there is no organized system of exchange, agricultural efficiency in the sense of the highest yield of any crop per acre can never be the gardener's first and only objective, and I was constantly impressed by the difference between the rules of cultivation explained to me and the variety of other motives—such as shortage of labour, a sudden increase in the mouths to be fed, a desire for a particular crop, or a late start in cultivation—any of which might determine the sequence of crops actually planted.

241 (i) *The usual sequence.* The most common sequence of crops in the areas I visited was as follows:

1st year . . .	Millet
2nd year . . .	Ground-nuts
3rd year . . .	Millet

and this is the answer usually given by a native when he is asked what he plants each year. This sequence gives an alternation of the staple grain crop with a legume and provides the Bemba with the two chief foods he needs. The fourth and possible fifth year of cultivation varies.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

Before planting the ground-nuts,[1] the straw of the millet is burnt in the dry weather in October (*ukuoce mpimbili*) and the soil hoed very lightly. When the nuts are ripe the following year (May–June), the whole plant is pulled up and the soil left fallow till September when the third-year crop of millet, known as *nkungwila*, is planted in the dry weather before the rains (*ukupamina*). The people only expect to get half as much grain from their third-year gardens as from their first, but they need the extra grain, and the crop ripens more quickly than the main sowing, as it has been planted earlier.

This *nkungwila* crop is of interest as an example of a change in cultivation, possibly due to contact between one African people and another, before the coming of the white man. Two old men told me that 'at the time of the birth of my first child', i.e. thirty or forty years ago, the *ififwani* gardens used to be abandoned after the ground-nut crop had been reaped, and the owner merely came back to dig up the self-propagated nuts (*shyamakoka*) the succeeding year. The Bemba seem to have learnt from the Lungu and other tribes to the west, that it is possible to get a second crop of millet from the one garden, and now this custom is almost invariably followed. 'Hunger taught us' is the expression usually used.[2]

In the fourth year the soil of the *icifwani* is thoroughly dug up by being raised into mounds. In this year a variety of alternatives may be followed. The most usual is to plant beans or some other legume crop, and then to allow the soil to revert to bush. But if the soil is good the Bemba will follow the legume with Kaffir corn, and perhaps after that with sweet potatoes, which are believed to grow anywhere and to require no attention. This makes a sequence of six years, i.e. millet; ground-nuts; millet; beans alone or with sweet potatoes; Kaffir-corn; sweet potatoes, and gives the alternation of grain and legume three times. The *nkungwila* millet may also be followed by Kaffir corn and then by beans—a sequence I saw practised near Kasama.

The five- and six-year sequences used on good soils show that the Bemba are perfectly capable of using their environment to its best advantage when they have the opportunity to do so, and

[1] Ground-beans are occasionally planted instead of ground-nuts in suitable soil, but no other legume to my knowledge.

[2] *Nsala yatufunda.*

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 that they may not be incapable of adapting their present cultivation to a new system of habitation. The longest sequence of this sort I had described to me was on very rich, red loamy soil at Kampamba,[1] near Malole mission, where the alternation was stated to be as follows:

1st year . . .	Millet with cucurbits
2nd year . . .	Ground-nuts
3rd year . . .	Millet with cucurbits
4th year . . .	Kaffir corn
5th year . . .	Peas
6th year . . .	Beans
7th year . . .	Fallow
8th year . . .	Ground-nuts
9th year . . .	Millet with cucurbits
10th year . . .	Kaffir corn

(ii) *Millet–cassava sequences.* Alternatively, the Bemba may prefer to follow their third-year millet with a root crop, or to plant cassava and millet together the first year. By this method very little work is needed, since the cassava crop stays in the ground two or three further years and requires no further attention.

(iii) *Millet–Kaffir corn sequence.* The Bemba also alternate millet with Kaffir corn. The simplest method is to sow a few seeds of the perennial Kaffir corn (*sonkwe*) broadcast with a handful of millet. Both crops are repeated together the first year, and the second year the *sonkwe* will spring up again with the ground-nuts subsequently planted with it, and the third year it will sometimes be allowed possession of the garden with any self-propagated ground-nuts that may come up. The sequence is thus:

1st year . . .	Millet and *sonkwe*
2nd year . . .	Ground-nuts and self-propagated *sonkwe*
3rd year . . .	*Sonkwe* and self-propagated nuts
4th year . . .	*Sonkwe*

No further work of mound-making is required.

But where the soil is good enough to grow the annual Kaffir corn (*amasaka*) the Bemba plant it in preference to other foods, since they like the flour made from it. It can be sown in an *icifwani* after millet, and may be planted two years running on good soil. It is

[1] This sequence struck me as so unusual in a tribe of shifting cultivators that I returned a second time to the village to verify it.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

sown broadcast the first time and planted on mounds the second. Thus in 1934, on rich red loam five miles from Kasama, I heard the following sequences described:

1st year . . .	Millet
2nd year . . .	Kaffir corn (broadcast)
3rd year . . .	Kaffir corn (on mounds)
4th year . . .	Millet
5th year . . .	Sweet potatoes
6th year . . .	Kaffir corn

In the same year in another Kasama village I met a different variation of this sequence:

1st year . . .	Millet
2nd year . . .	Kaffir corn (broadcast)
3rd year . . .	Millet
4th year . . .	Kaffir corn (on mounds)
5th year . . .	Beans

This shows that two grain crops may be planted running by the Bemba on good soil.

(iv) *Double millet sequence.* It is very rare for the Bemba to attempt to get two crops of millet running, but I saw a case where this sequence had been tried, unsuccessfully, near Chief Makassa's village, and heard of it as being fairly common in Chief Kaporye's country. In both instances the soil was described as being 'strong red earth' (*ua nkanka sana*), and in both the second crop of millet was sown broadcast after burning the straw of the previous year, and lightly hoeing the surface of the soil. The alternation was as follows:

1st year . . .	Millet with pumpkin and gourds
2nd year . . .	" " "
3rd year . . .	Beans or sorghum sown on *mputa*

Native agriculture is often described as a simple stereotyped procedure, but these different sequences show the number of alternative forms of cultivation from which the Bemba has to select.

(*d*) *Sequence of crops on the village beds.* The village beds are also used as long as possible. In fact it is the exhaustion of this soil rather than shortage of trees in the neighbourhood which decides a headman to move to a new site. In the first year the Bemba, according to their fundamental belief in the value of

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 burning soil, pile up branches on the small strip of ground allotted to them near the village, if there is sufficient brushwood to do so, to make a tiny seed-bed for millet (*akakumba*) in this way. They also dig up long ridges (*amolua*) and cover these with brushwood which they fire before planting cucurbits. But, apart from these few fertile patches, the native must rely on mound-making to cultivate his village beds.

It is in these beds that the Bemba gardener has his hardest proposition to tackle. A man who does not like the soil of his burnt garden can cut a new one elsewhere, but the strip allotted to him near the village cannot be altered. He must find some crop to suit it or go without. The ground round a village often varies considerably. For instance, at Kacenja, near Shiwa Dandu, only two out of nineteen cultivators were able to grow cassava, while another had been experimenting for the last four years without success. One owner had six mounds on which cassava flourished out of about three hundred on which it was poor.[1] In another village, Mungulube, near Chinsali, the soil to one side of the village was a good rich black loam (*uafina, uatikana*), and on this soil Kaffir corn seemed to have been grown three years running; but on the other side the earth was sandy and light (*uanguka*) and here the same crop was stunted after sowing a second year.

For all these reasons it is difficult to speak of a definite sequence of crops on the village beds. A man digs up a certain number of *mputa* on his *ulukolo* the first year—'the mounds of the inauguration of the village' (*mputa shya nsokwela*). Next year he takes more ground into cultivation, and so on till the fourth year. Some he leaves fallow from want of labour for the hoeing or mound making, or shortage of seeds, and others he cultivates with different crops according to his individual judgement. Lastly, when the village moves, he can return and gather sweet potatoes or any crop he may have left there as requiring very little labour and spreading very fast. The land-tenure map (see Appendix) shows a series of strips taken into cultivation in this way, and the whole appearance of the village beds is like a patchwork of different crops in the early rains—an overgrown jungle in the late.

The most common sequences can be divided into those that begin with a legume crop planted on the new turf mound and

[1] Cf. pp. 283–4.

2::Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

those with root crops. In good red loam I saw most commonly 241 ●
the following sequence:

1st year . . .	Beans
2nd year . . .	Kaffir corn and pumpkins
3rd year . . .	Kaffir corn and pumpkins
4th year . . .	Fallow, or complete remaking of mounds before more Kaffir corn
5th year . . .	Kaffir corn

The same sequence was also found with sweet potatoes substituted for pumpkins.[1] A simpler sequence is: beans followed by maize and sweet potatoes, for as many years running as possible,[2] and the sweet potatoes are then left to ramble as they please till the village moves. Another common sequence is:

1st year . . .	Cassava and sweet-potatoes
2nd year . . .	Cassava and sweet potatoes
3rd year . . .	Cassava dug up and mounds remade and more cassava planted

On poor soil I also saw:

1st year . . .	Sweet potatoes
2nd year . . .	Sweet potatoes and maize
3rd year . . .	Maize
4th year . . .	Sweet potatoes

or

1st year . . .	Beans
2nd year . . .	Sweet potatoes
3rd year . . .	" "
4th year . . .	Tobacco and pumpkins

The Bemba use of old house-sites for cultivation has already been described (p. 282), but since these sites (*ifitantala*) are often cultivated for two or three years running, this method of using refuse soil must be mentioned again under the heading of sequence of crops. The cultivation itself is simple. It consists of waiting till the house has decayed (one rainy season) and then breaking up the

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[1] Kacienja and Shimusenga, near Shiwa Dandu, 1933. At Mungulube, a mixed Bisa and Bemba village, near Chinsali, millet was sown the fourth year on a seed-bed formed by flattening out the third-year *mputa*, and it was followed by Kaffir corn again, 1933. This was specially good soil, described as 'heavy, sticking together', and one that does not get cold quickly; one that is warm and gives off smoke'.

[2] Seen at Kungu, near Kasama, 1934.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 rubble of the walls and digging it into the ground till it is soft. The following year the house-site (a rough circle of about fifteen feet in diameter) is hoed over and maize and pumpkins sown on it, as long as the soil remains fertile, after which tobacco or sweet potatoes take its place. This intensive use of old village-sites is likely to have increased importance in urban areas where the villages tend to shift very little. For instance, round Kasama the villages tend to move a quarter of a mile or so from one site to the other—and they make up for want of new land by growing maize, pumpkins, and tobacco—all plants needing rich soil—in ground where their old houses have rotted. The size of the maize plants grown on these *ifitantala* looks as though the increased use of this old practice would be a very successful one as long as the people do not want to build permanent brick houses and thus rob themselves of the use of this refuse soil.[1]

The map in the Appendix shows how the village Kampamba shifted from one site to another contiguous one and continued to cultivate its old house-sites, and the example given below will illustrate the use of the *ifitantala* more clearly.

241 177 *Mound cultivation in a modern village.* I give the following description of mound cultivation in a particular village for several reasons. First, it happens to show clearly the variations in the soil often found between the different strips round one village, and hence the degree of experimentation that is necessary when cultivating the village beds. Secondly, it shows the degree of individual variation in efficiency that exists, and this is specially marked in a modern village of the type described. Thirdly, in this village the people were actually making an effort to adopt fixed cultivation, and their methods of adaptation are of interest in that respect.

241 432 177 Kungu Village, near the Government Station at Kasama (visited March 1934), had remained fixed in the same spot for ten years, i.e. twice as long as the average Bemba village. Natives admitted that much of the garden soil was bad, but declared they did not want to leave the present site because it lay along a good bicycle path to Kasama, three miles off, where twenty-two out of the twenty-eight taxable males in the village were at work, and where it was possible to find a sale for vegetables and milk to

[1] There are of course other reasons in favour of the brick house—a raised standard of living, &c.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

Europeans,[1] and beer to Africans resident in the town.[2] The houses had, therefore, been rebuilt twice since the founding of the village in 1924, but one site was only a hundred yards or so from the other. A third re-building was being planned during my visit on a site also in the near vicinity. Hence it is likely that this village may remain fixed for a period of twelve years, instead of the usual four or five.

The soil round this village varied tremendously. Some of the cultivators were gardening on a strip of light, sandy soil covered with scrub, and of these nine failed completely, even though four could probably have produced better results by hoeing more thoroughly. In a series of newer gardens, thirty-three gardeners were cultivating a different type of soil round the present village. Of these thirty-three, eighteen had made successful gardens—twelve on good soil, four on bad ground enriched through village refuse, and two because the owners, two elderly widows, 'had hoed so much that they managed to get food out of sand'. Ten gardeners had failed, seven through the poverty of the soil, two through not weeding sufficiently, and one because old potato runners had remained in the soil and were 'stealing the food of the maize'. Twenty-six other gardens had been made on better soil some distance away near the river-bed, and here the proportion of success was much higher. Thirteen of these gardens were on black loamy soil, and eight on the rich black mud of the river bank; two on a streak of clay; one on sand and two on the edge of an old village site. Of these twenty-six gardens, nineteen were successful, six were still being tried, and only one was a failure—said to be due to insufficient hoeing. On the other hand, those gardeners who were growing maize on the deserted house-sites of their village were nearly all successful. This maize was two or three feet higher than that on the surrounding village beds, and only two out of the fifteen disused house-sites were failures, due to want of judgement in sowing the patch too soon before the rubble of the old house had dissolved in the rain. Thus it will be seen that, of the total number of gardens, twenty out of ninety-two, or nearly twenty-two per cent., were unsuccessful, chiefly, in native eyes,

[1] Four inhabitants owned between them fifteen cows, nine sheep, six bulls, and three goats.

[2] The brewing of beer for sale is, though illicit, one of the few means of livelihood open to an elderly single woman, and many widows or deserted wives drift to the villages near the town for this purpose.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241
177

through the poverty of the soil or the wrong choice of crop, but also through bad gardening in some cases.

I do not know whether the rate of failure among these gardens was higher than that of the ordinary Bemba village. In native eyes it was so. Some gardeners definitely explained that they knew that some of the soil was exhausted, but they were continuing to dig there because they wanted to live near the environs of a town. They said that they could only succeed by leaving their village every two or three years and planting the disused house-sites, and their judgement seemed to be confirmed by the splendid crops of maize they had managed to get when cultivating these *ifitantala*. But other natives criticized the gardening of the inhabitants. They pointed out that some householders were using paid labour and that paid gardeners were 'slaves' who could not be trusted to work well. In at least four cases natives were paying men to dig their beds, while they worked in Kasama, one of these being a woman who had invested a large sum of money, acquired through the marriage of her daughter, in cattle and was paying two labourers thirty shillings each to dig her mounds on the proceeds of the sale of the milk.

I noticed myself greater individual differences in gardening efficiency in this and other villages near Kasama than in the bush communities.

In spite of these modern adaptations to urban life, the natives had acquired no new agricultural methods more fitted to a settled life, nor had they been taught any. The manure of cattle was thrown away unused. The village refuse was recognized to make the whole difference to the poor soil of some gardens, but it was never collected and spread. The only successful adaptation made by these natives was their use of the deserted village-sites for cultivation, the latter lying a few hundred yards from each other, with the more limited range of movement found among suburban communities.

As regards the efficiency of cultivation, I noticed in this and other villages near Kasama greater individual differences than in the bush communities. Several young men had planted their mounds so thickly with different crops that each seemed stunted. They laughed and shrugged their shoulders and said: 'We came back from the mines and thought, we are tired, let us rest now! Then we found that the time had passed for planting and so we

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

said, "*Yangwe!* Hunger will catch us!" So we planted every seed at once.' 241 ● 177

As a contrast to this inefficient cultivation, I found in these communities one or two natives more skilled in Bemba agriculture than any one else in the country. One cultivator, himself an artisan at work in Kasama, taught me more about Bemba agriculture than I learnt from any one else, and had a larger strip of land under cultivation than would have been possible in an ordinary village. He profited from his fellows' constant movement and lack of interest in their gardens. The few men who were paying labour were also making experiments on a more daring scale than would have been usual elsewhere. Lastly, several old women, entirely [868] without support of male relatives, which would rarely have happened in an ordinary village, were hoeing with an energy thought frenzied by their fellows 'because of their hunger'. This individual variation in cultivation is, I think, characteristic of the modern Bemba community. It is not only that an individual household economy is appearing and with it inequalities in food consumption, but also here and there specialist gardeners, trying to make a success of village life instead of going to the mines. For instance, at Mubanga, six miles off, was a community of enterprising cattle-owners who had obtained permission in 1924 to build huts apart in the bush so that their small herds might not damage the crops of their neighbours. These two natives were plainly men of unusual initiative who had acquired knowledge of cattle-keeping during their travels down south, and had realised the money-making possibilities of selling milk to the small white community of Kasama. They were later joined by natives from elsewhere who wanted the chance to settle near Kasama, and the community was finally constituted a village by the chief, who appointed one of his sisters, Mubanga—a disreputable and unpopular old lady—as headwoman. She was joined by individualists of all sorts—those of the old régime and those of the new. Her adjutant, a middle-aged man who came from another village, was so much disliked that he had bought himself three goats in order to get the necessary permission from the Government to live outside the village. Near 241 his small settlement was a native convicted of sorcery by the 177 Hunting ordeal.[1] No one would have him in their village, so 754 he borrowed five pounds from a well-to-do nephew at Ndola,

[1] Cf. p. 345.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

[754] bought cattle, and thus managed to acquire permission to 'build alone'. In 1929 a young tailor at work in a store at Kasama, who had spent some years in Southern Rhodesia with some relatives and had there seen maize cultivated on a large scale on a European farm, joined the community. He had saved money and built himself a four-roomed brick house a few yards outside Mubanga, with six huts around it for dependent relatives. He had then invested in a plough, with which he had put a field of about two acres under cultivation, and had planted maize European fashion. Mubanga village was, in fact, composed of a few individuals of unusual enterprise, much ahead of their contemporaries in outlook; two or three malefactors or unpopular persons living as outcasts near the European town under the cloak of the new economic [548] practices; a successful prostitute, who was paying two men to work her gardens for her; a more or less floating population of wage-earners; and a nominee of the Paramount Chief, who constantly tried to keep control over the town natives by appointing one of his own relatives to the position of headman or headwoman.

241 To conclude, my description of the Bemba attitude to their food-stuffs showed their entire dependence on one staple crop, millet, which they consider as an absolutely essential food, and which has a special social and ritual value for them. In their agricultural life, millet cultivation is the dominant activity. It absorbs their energies and enthusiasm and its demands are put before that of any other crop. Fortunately its cultivation is simple according to the Bemba method, even if the latter is now unsuitable owing to its complete dependence on male labour. The ground cleared for millet is used with a good deal of skill for the planting of other crops in subsequent years even though these old burnt gardens are no longer used to the full owing to decreased man-power.

In growing his subsidiary crops the Bemba show considerable knowledge of the properties of different crops and the use of soils, especially in their cultivation of the village beds. But here sociological factors often militate against successful agriculture. Historical tradition and the native's attitude to different crops determine their willingness to grow them. Village sites may be chosen and moved for non-economic reasons. Various psychological factors prevent the natives from putting their maximum effort into mound-cultivation, and shortage of labour and the breakdown of the tribal education system have pronounced

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2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5
Bisa

effects. All these reasons prevent the agricultural knowledge of some of the older Bemba from being used with the best results. Some signs of the adoption of a more fixed habitation are seen in the villages round Kasama, where the people have shown considerable shrewdness in the use of their old village sites as a means of prolonging the fertility of the ground, and here modern economic conditions seem to have resulted in the appearance of the specialist gardener, who does better than his fellows in the bush, side by side with a mass of inefficient and indifferent cultivators.

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The Adoption of Fixed Cultivation in Special Environments

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An interesting example of the adoption of fixed cultivation in response to special environmental conditions was noted by Mrs. Gore-Browne among the Bisa on Cilubi Island, Lake Bangweolu, in November 1933. Here shortage of land on a small, rather densely populated island, and shortage of trees for the making of burnt gardens had caused a revolution in agricultural methods during a period of 15–30 years. Forest gardens were now cultivated continuously with a year's fallow every fifth year instead of the former shifting cultivation, and the staple crop had been changed. These people formerly grew millet after the Bemba fashion in burnt gardens and planted cassava with it. The history of particular gardens during the last sixteen years showed that cultivators had been able to use their land nine years running in the first instance, sowing millet with the cassava the first two years, then planting a succession of fresh cassava cuttings for three, redigging completely, and repeating the same sequence of cassava and millet in the subsequent four years. The ground was then left fallow for two years and by this time—the twelfth year of occupation—all attempts to grow millet were apparently abandoned and the people adopted a regular sequence of planting cassava, setting cuttings for three years running and following it with a ground-nut crop for the fourth year. After this they allowed the ground to lie fallow for a year, and then restarted the same four-year sequence.

In this way, the particular gardens visited had been kept in more or less continuous cultivation for a period of sixteen years. Under these conditions the Bisa have had to give up the use of millet as a staple crop entirely. They live upon cassava with a great deal of fish from the lake and a few supplementary foods such as ground-beans and peas grown on a small scale in special gardens made in the alluvial soil near river banks. They only plant millet for beer, and that on a neighbouring island with rich soil, and travel there by canoe two or three times a year

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5
Bisa

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to sow or harvest their crops, giving tribute to the local chief for the right to use the land. For the rest, as the first step in fixed cultivation in poor soil without manure, they make extensive use of deserted village sites as do the Bemba, and other local systems prescribe carefully the method of use of this valuable ground.

This instance shows that the native is perfectly capable of adopting some sort of fixed cultivation when environmental conditions compel him to do so. I do not know whether such an adaptation would occur among the Bemba with their far greater reliance on millet for their diet and their traditional interest in the crop, but I saw a case of conscious adoption of the Bisa practice by a Bemba village living near their border on a treeless plain on the banks of the Luansenshi River—1933, a year of locust raids. Here, the headman told me, the villagers had decided by common consent to give up their *ifitemene* for the first time in their lives 'because we have used up all the trees and we said "Well! then let us turn into Bisa now"', i.e. live on cassava. Such instances of the purposive adaptation of the customs of a neighbouring tribe, by a people living on their border, show that the hand of custom is not as heavy on the African as is sometimes imagined.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

769 796 178 rite was connected with one of the most sacred of the Paramount's *bubenye*, a girdle made of the skin cut from the abdomen of a legendary figure, Mwase, said to have been killed for committing adultery with the Citimukulu's wife. It has now long since rotted away, but living men tell of occasions when the relic was taken from the *benye* house, bound round the waist of a young virgin, the maternal niece of Munuca, the greatest *mukabilo*. The girl then danced across the garden of the chief, scattering blessed sorghum seeds broadcast, while the Citimukulu and his *bakabilo* followed behind. This story, always told with great delight, seemed to me a sign that the sowing rites must have had greater importance formerly than at the present day.

769 796 241 Nowadays, the blessing of the seeds at a commoner's village is done in typical fashion by standing them in a calabash at the end of the headman's bed. In the morning, after the usual purification ceremony, they are sown in the headman's garden, all the villagers coming to help.[1] But I never saw such a rite performed myself, and I noticed that some natives were doubtful as to which seeds actually had to be blessed. For instance, of 10 informants, all gave pumpkins in their list, 8 Livingstone potatoes, 7 Kaffir corn, 6 maize, 5 *amankolobwe*. At the capitals, however, the sowing rites still persist. At Nkula's village in 1930 Kaffir-corn seeds in a huge gourd were stood overnight in the *benye* house and were sown next day on the chief's *mputa* by all the women of the village. The sowing ceremonies evidently used to give the people a sign when to start planting their crops, a matter on which skilled guidance is often needed, but it is doubtful whether they were ever occasions of big tribal gatherings of rejoicing as in the case of tree-cutting or harvest rites.

769 796 171 182 (*d*) *First-fruit ceremonies*. Some form of first-fruits ceremony seems to be performed in all typical Bantu societies, and in these there are certain common elements recognizable. But the symbolism of these rites is often exceedingly complex, and varies widely from area to area. The ceremonies also tend to become the occasion of big tribal gatherings such as the army rites of the Zulu since they inevitably occur at the plentiful season of the

[1] One informant told me his father, a headman, always blessed the seeds of all the villagers and gave them each a handful to mix with their crops, but in most instances now it seems that the headman merely blesses and sows his own seeds. In Bisa districts, such as that near Shiwa Dandu, the original form of the rite seems to be more often adhered to.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

and men do not willingly cook, because it is a woman's occupation. On the other hand, men do most of the women's agricultural work, when performing their tribute labour for the chief (including harvesting and piling branches), and it is common to find a man cooking for the chief when the latter is travelling through the country, since by this means he avoids the dangers of impure contact with his cooking-fire. In the same way women try to fence gardens now, however inefficiently, and near Kasama I saw an emancipated woman mudding the walls of her hut instead of a man. This conduct was thought amusing and rather daring, but not definitely wrong. There is no doubt that the rigid sex dichotomy of labour based on magic beliefs, which is characteristic of some primitive societies, does not now exist among the Bemba, and all the handicrafts, such as basket-making and mat-making, could probably be taught to the women without much protest.

Organization of Labour.

(*a*) *The family.* The essential economic unit is the individual household, since each husband makes a garden for each of his wives and builds her a granary, but just as each family shares supplies with the other householders in the matrilocal group, so their agricultural labour is done in co-operation. This is particularly so as regards the big millet gardens. During the early years of married life a young couple reckon to cultivate their village beds more or less alone, but the parties of men who go out together to cut trees or fence gardens usually consist of a father-in-law with his sons-in-law, and possibly young sons or maternal nephews under marriageable age. Young men like to work together, and therefore the men who have married daughters of the same household often make gardens near each other. The size of the group varies. In the old days it is probable that such a unit included four or five men and some boys, allowing for the inclusion of one or two slaves which was apparently the number usually owned by a rich commoner. In an old-fashioned village of to-day the team would be somewhat smaller, but would still include one or two sons-in-law, either working on their father-in-law's garden or camping near him in grass shelters at the tree-cutting season. For instance, in the specimen village Kasaka, Malalo, head family B, had an encampment of six grass huts, about three miles from the village occupied by himself, his three sons-in-law, and two

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

241 592 sons, one a widower, and one whose wife's relatives lived a long way off (cf. Chap. X). But these groups, composed of two or three men, are becoming rarer, and it is common to find the old men making gardens single-handed for two or three deserted women relatives.

241 592 476 A woman's gardening group is usually composed of herself and her married and unmarried daughters, but as will be clear from Chap. VIII, her other female relatives tend to join up with her, especially under modern conditions. The husband's relatives (his mother or sister) occasionally co-operate also, but this is rare and would only be found in the case of older women of superior social status. A man would have to make his mother or sister her own garden in this case. The custom described as *ukupula* (Chap. IX) naturally provides for many additions, chiefly temporary, to the woman's gardening group.

The extent of co-operation varies, particularly among the men. In the old-fashioned villages you will still see a group of young sons-in-law working under the direct orders of their father-in-law, who is in complete charge of the selection of garden sites and the clearing of the bush. Where the sons-in-law are older, they would still make gardens near each other 'because our wives like reaping together', or in the case of pairs of young men who are close friends, they may like to work alternate days on each other's gardens for company (*ukuteme cima*). They say the work goes quicker so. In fact, a Bemba rarely works alone in a garden till middle or old age, and never likes doing so, nor works very efficiently under these conditions (cf. Chap. XIX).

621 (*b*) *The village*. The Bemba village may also be described as an economic unit. Certain tasks are definitely performed in the community. These include net-hunting, in which all the men of the village combine, and fish-poisoning expeditions joined by men and women. Joint work is done in clearing the village paths and in old-fashioned villages once a year on the headman's garden. The village is regarded as a unit for *umulasa* purposes, and its agricultural ceremonies and foundation rites are performed for the whole community.

Added to this, the working parties (*ukutumya*) described in Chap. IX in effect consist of all the able-bodied men or women respectively of the village. Thus the bigger the village the larger the force available for economic co-operation of this kind. The

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

621 grand-daughters, 2 sisters, 2 maternal nieces, and 1 sister-in-law);
624 8 per cent. of the inhabitants only were thus closely related to the
184 headman, and 10 men were actually members of quite different tribes.[1] Thirty out of the 52 men had joined the village with the express purpose of finding work with the Europeans at Kasama and not on kinship grounds at all. In a community of this type Bwembya evidently found it impossible to control the activities of his people, and they gave him little economic help in spite of his royal rank. It is often stated that young men lose respect for tribal [177] authorities after working in the mines, and this is largely true, but it must also be borne in mind that the tribal authorities are in charge of groups of quite different composition from those of old days, and they are asked to perform different functions of leadership.

241 (*c*) *The chief's leadership in economic enterprises.* There are
622 two aspects of the chief's functions as an organizer of labour. In the first place, there are a number of activities he actually initiates and co-ordinates, and in the second, his direction of his own labour force and his accumulation of stores in the capital, sets the pace for agricultural enterprise and forms the basis of the whole economic system of the tribe.

We have seen that the chief actually sets the time for the firing of the gardens, and that the performance of economic rites still to some extent gives the signal for tree-cutting and sowing. The knowledge that big gardens are being made at the capital, acts, as I tried to show, as a stimulus to the undertaking of further work.[2]

Besides, it is difficult to realize, without living at the capital for some time, the extent to which the *mfumu* directs agricultural enterprises by advising or criticizing both the members of his own big village and those of his *icalo*. Ultimately chiefs want food produced in their district, because they then get plenty of tribute. They express this fact quite frankly. A severe shortage also, as I indicated, reflects on their supernatural powers, makes people begin to grumble, and even in time threaten to leave.[3] From all points of view, therefore, it is to the chief's advantage that the people should cultivate efficiently. Their knowledge of cultivating processes, soil selection, and the best moment for planting is also

[1] Note the proportion of men to women in these villages: i.e. 25:35 and 52:108 respectively.

[2] Cf. p. 371.

[3] e.g. the charges made all over the country against Citimukulu during the recent locust epidemic for failure to perform his ritual duties properly.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

considerable. Even the most stupid or beer-sodden rulers seemed to discuss such matters with authority. The chief always selects his own site for tree-cutting in my experience. I have seen Citimukulu and Lucembe advise women as to whether their millet was ripe enough to reap, and Nkula upbraiding some of his people on two occasions, once for making village beds on unsuitable soil, and at another time for not fencing properly. He turned to me with a look as despairing as that of any white educator, and said: 'Look at them! They are working anyhow (*cibombebombe*). Is not that what hunger does?' [1]

Of their *icalo* as a whole the chiefs also know a great deal. The messengers who go about from village to village to fetch tribute labourers, or the headmen who come on business to the capital, report on conditions. I was amazed in fact to find how much of the conversation in a chief's hut concerned the whole organization of the food-supply, the exact type of soil in such and such a place, or the methods successfully used on it. Comments and criticisms are passed freely. The chief also knows when and where the rivers are in flood, and, in an incredibly short time, how many buck any travelling European has hit or missed. Thus his position at the capital, a place where people constantly come and go, his specialized knowledge of agriculture, and his personal interest in food-production, the latter at present correlated with the whole tribute system, gives the Bemba ruler opportunity to lead and influence the agricultural activities of the whole tribe. This fact may well acquire administrative importance if any new improved system of cultivation is ever discovered for this area.

In his own gardens the chief organizes the biggest labour force that exists in the country. To clear the bush on a large scale (*ukutema pakalamba*) means making a number of gardens in the case of a leading chief.[2] When cutting on a large scale, many gardens are made. For instance, in 1933 Citimukulu made gardens as follows:

Personal *mulasa* gardens: (1 big and 1 medium)	= 3·2	acres (approx.)
Gardens for 16 wives: (11 medium and 35 small)	= 8·5	,, ,,
Gardens for 4 'brides of the relics': (3 medium and 3 small)	= 2·8	,, ,,
Help over gardens for 4 courtiers, 1 blind singer, 2 widowed sisters: (gardens unmeasured)[3]	= 3·5	,, ,,
	18	,, ,,

[1] *Moneni apa! Balebomba cibombebombe. Te nsala?*

[2] This does not happen every year (cf. p. 215).

[3] These gardens were roughly paced round the edges. A big garden means

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

In 1932 Makassa made one big personal garden of about two and a half acres and medium gardens for five wives, two inherited widows from his predecessor, one widowed sister, and one deserted daughter. The amount of labour required during a nine-months' period for all the garden work of the Citimukulu plus the building of a new village has been given as 561 men and 329 women.[1] Mukuikile—a smaller chief—required 275 men-days for the cutting of his gardens, and 210 women-days for piling the branches.

In general, the *umulasa* labourers are supervised by the chief himself or one of his head officials, and the organization of this irregular labour force is one of the most important tasks he has to undertake, since on it his tribal supply of food depends.

Even though the *umulasa* labourers only work for the inside of a week, there are often as many as twenty or thirty men or women in the gardening team, drawn from different villages all over the *icalo*, so that the chief has not only the power to organize his own garden work but definite possibilities of instruction.

Work and Time Sequence.

From the main calendar of seasonal activities shown above, it will be seen that the season for tree-cutting, the hardest work of the men, is the cold time of the year, but this lopping of the branches can really be done at any time during the months from April until September when the forest fires which break out in hot weather might threaten to destroy the piled wood. The beginning of tree-cutting usually necessitates the movement of the whole family out into the bush, and thus makes a real break in the rhythm of daily life. During these cold weather months there are few other important food-producing activities for the men. For those who live on rivers, fishing on the flats begins in April and low-water fishing in July. The best months for net-hunting are hot weather at the end of this period. Basket-making and thatching must be done while the grass and reeds are still tall enough,

one more or less round, about 400 paces round; a medium one about 200 paces; a small one only 40 or so. Their area may therefore be calculated as follows:

'Big' gardens—2½ acres approx.
'Medium' gardens—7/10ths of an acre approx.
'Small' gardens—1/40th of an acre approx.

N.B. 4–10 acres of forest is needed according to the growth of trees and type of forest for one acre of garden. These approximations were made for me by Mrs. Gore-Browne.

[1] Cf. p. 258.

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

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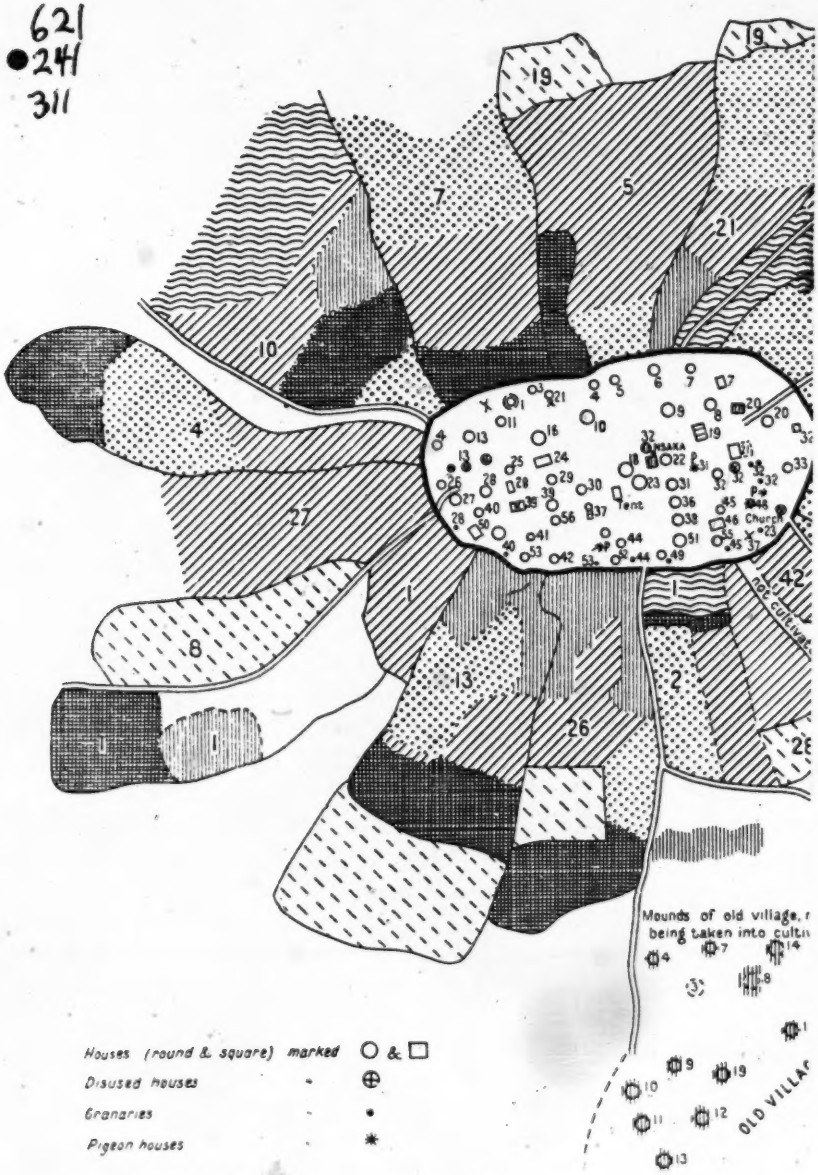

[end map I(a)]

2:Richards E-5 (1930-1934)1939
FQ5 Bemba FQ5

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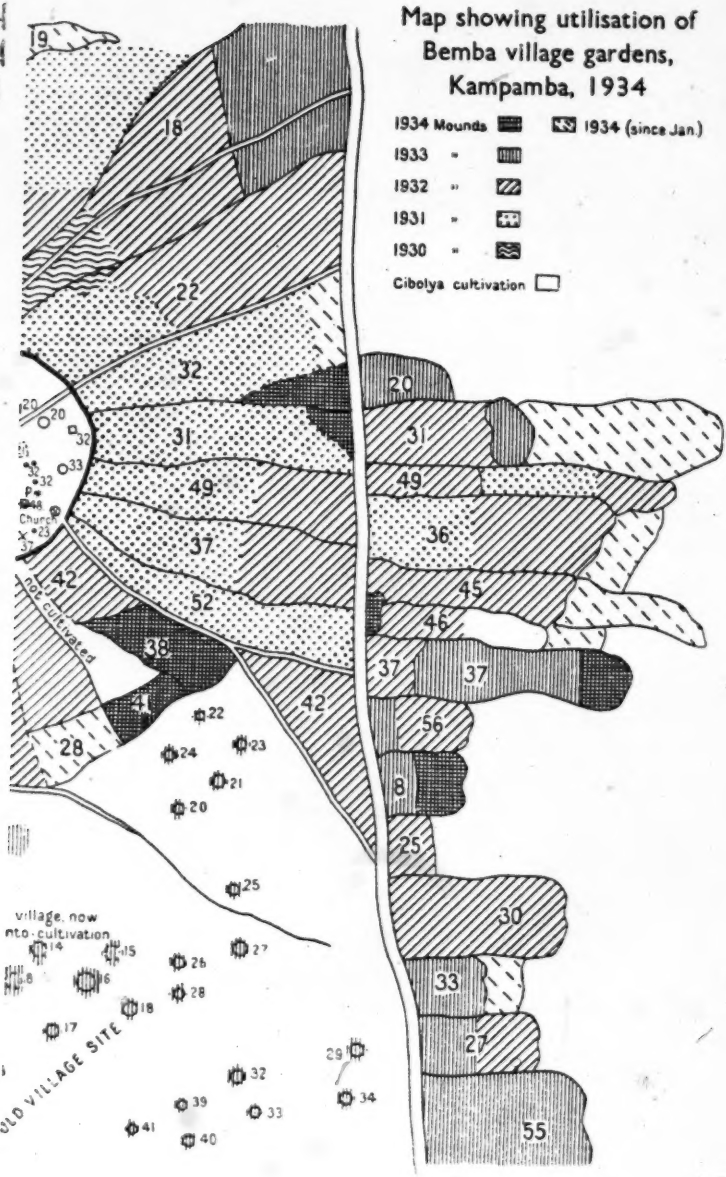

[end map 1 (b)]

3: Richards E-5 (1930-1934)1956
FQ5 Bemba FQ5

duties, most of which are represented in mime. It gives magic protection to the parties concerned.

How far does the ceremony express other tribal beliefs and values? The following diagrams attempt to show the relation of certain characteristic features of Bemba culture, as it is described in Part I, to the chisungu and to other ceremonies which go to form the ritual pattern of this tribe.

The most important of these ritual series are three in number, if importance is judged, as I think it should be, by the length and complexity of the rites and the time and interest shown in them. The first of these ritual series is the ceremonial surrounding chieftainship—the long and arduous rites of royal burial, the almost equally protracted and complicated ceremonies for the installation of a great chief, and those for the building of his new village and his sacred relic huts. The second is the series of economic rites carried out at the clearing of the bush, the firing of the piled branches on the cleared site, the sowing of the seeds, and the harvesting and first fruits—and in the old days those concerned with war. The third comprises the chisungu ceremonies themselves.

The ritual pattern in all these ceremonies is based on an essentially homogenous body of beliefs—that is to say the dogma which links authority with the exercise of supernatural power based on access to ancestral spirits by those who have correctly handled sex and fire. In order to secure blessings in war, for tree-cutting, sowing, first-fruits, the filling of the granaries and for good weather, human fertility, harmonious relations in the village or a successful reign for the paramount chief, those in authority must have ceremonial intercourse with their head wives and then light new fire.[1] The same must be done when a new role is assumed, when, for example, a chief is installed or a girl made nubile, or a couple married. Such people are separated from the rest of the community and restored to it after an act of ceremonial intercourse —the lighting of new fire, the touching of the lips of the aspirants to the new role with a particle of food cooked on the new fire,[2] and their presentation to the community for congratulation and

[1] The economic rites are described fully in my *Land, Labour and Diet in N. Rhodesia*, 1939.

[2] *Ukubalishya* or *ukubapa kakabe*.

3: Richards E-5 (1930-1934)1956
FQ5 Bemba FQ5

admonition, as in the ceremony of *ukushikula* after marriage or the installation of a new chief or chieftainess. The same words are used for all these constituent ritual acts, and it would be difficult for a passer-by to distinguish one rite from another.

This fact surely accounts for the importance of the chisungu rite in Bemba culture. It is the occasion on which the girl is given her fire and her marriage pot and made responsible for their care and their use. On her handling of the hearth depends her husband's power of access to his ancestral spirits or, if she be married to a headman or chief, the blessings which are available for gardens, bush and village, political life and warfare. A glance at the chart will show that except for individual magic rites, there are no ceremonies in the last column which do not, in the last resource, depend on the chisungu or on the abbreviated forms of puberty ceremony now carried out instead. The supernatural powers of the Citimukulu and his brother chiefs are directly pivoted on the chisungu and its magic and didactic acts; this purely feminine rite is therefore essential to the welfare of the whole tribe.[1]

The chisungu can also be considered of importance to the maintenance of tribal traditions, because of its direct emphasis on 'things handed down'. The *mbusa* are referred to specifically in this way and this is said to be their value. The central act of an economic rite is a prayer and supplication to the ancestors when the officiant asks for what is wanted, blessings on the seeds for instance, or peace. He asks for them from beings who will not always grant these requests. The words are uttered spontaneously and the sentences have no very fixed form. They mention individual ancestors by name, vary the terms of address, and add a number of immediate and special requests as well as the more usual demands for blessings and fertility. For instance a headman offering the first fruits to the ancestor was heard to add at the end of his discourse a fervent appeal that I might not miss when I went out shooting, as I had on the previous day.

The defined elements here are the time and method of approach to the ancestors and the status and position of the officiant. With

[1] This suggests a hypothesis for comparative research. If my interpretation of the importance of the chisungu is correct a similar emphasis on instruction and care in handling fire will be found wherever the chief's supernatural power is thought to be closely linked to it. This question will be discussed.

3: Richards E-5 (1930-1934)1956
FQ5 Bemba FQ5

these conditions fixed there is a wide range of possible wants that can be voiced, meeting the need of the moment or of the group or the person concerned. These are rites of supplication in which the Bemba voice their needs and try to persuade themselves that they will be fulfilled.

In the chisungu however the women do not voice new desires, but always those that have existed in the past. The rites consist of an intricate succession of acts the value of which lies in more or less exact repetition. The *mbusa* must be made in the same way and the pottery models on the floor cannot be altered. These are rites which represent and proclaim the established rather than ones which enable the performers to meet new needs. The mimes and emblems of these initiation rites form a charter for the transfer of roles that have to be constantly assumed in each generation. They do not grant the men or women who perform them any help in the present troubles of Bemba married life, such as the prolonged absence of men from the tribal areas or the growing divorce rate. There is no element in them of supplication or prayer. It is for this reason that the chisungu must be reckoned as a rite of maintenance of tribal traditions.

To turn again to the chart it will be seen that all the major rituals of the Bemba reflect the importance they attach to fertility and the supply of food. The chisungu is more closely concerned with fertility than rites of supplication performed by chiefs, yet I never heard a prayer uttered by a chief which did not contain a special appeal to the ancestors for parenthood (*bufyashi*). The cycle of agricultural ceremonies is one of the most important tasks the chiefs are responsible for. The links between the three sets of rites are here close.

It is not easy to account for the tremendous emphasis on fertility and the care of children in Bemba culture. The desire is likely to be strong in all societies where social structure is largely based on descent and groups can only be enlarged by the birth of new children. There are, however, many African tribes with similar social structures in which the emphasis on fertility does not seem to be ritualized in this pronounced way. But it must be remembered that in Bemba culture the lack of any permanent form of possessions makes rights over labour—here rights over the

MAIN FEATURES OF THE ECONOMY AND MATERIAL CULTURE

AGRICULTURE

241 Three main crops are grown in the area but only one of these, finger millet, is a universal staple: it is well suited to a highland climate and to rainy summers. Of the other two, Kaffir corn (*Sorghum Vulgare*) seems to be of decreasing importance, though it is still the crop of chief ritual significance. It requires a good soil and more labour, particularly in the protection of the crop from the ravages of birds. The remaining crop, cassava, seems to have been introduced into the area from the Congo and its use is still spreading eastwards. It is a staple in some areas, particularly in the Lake area. It makes a lighter but less sustaining flour than millet and is poorer in fats - which are deficient generally in the diet. Maize is grown as a subsidiary crop. Besides these, groundnuts, beans, edible gourds, pumpkins, cucumbers and cowpeas are planted.

241 184 The method of cultivation common in the area is known as the *citemene* system. The word comes from *ukutema* "to cut". It describes the common practice in this part of North-eastern Rhodesia of pollarding trees and piling the lopped branches in small circular patches which are then fired to form an ash bed in which the seeds are sown. This practice, also known as "slash and burn", is commonly held to be typical of, and to have originated with, the Bemba, but there is some evidence that it was borrowed from the tribes they found in the area; it is, in fact, almost identical with that found among the Lungu and some Mambwe-speaking groups. The Bemba themselves say that in Luba-land they were formerly hoe-cultivators and learnt the *citemene* practice from the peoples with whom they made contact on their arrival. The system differs from that practised further south among the Lamba-Lala groups, where almost no rotation of crops is carried out and the area cleared, besides being larger, is made into a number of small garden-patches. Trapnell distinguishes the Bemba practice as the Northern *citemene* system and that of the Lamba-Lala group as the Southern *citemene*.

This 'Northern' method involves the preparation, for the sowing of finger millet, of a single circular garden from a clearing in the woodlands. The proportion of pollarding required to provide the ash for a garden is estimated, for the more thickly wooded country, to be about 6½ times the size of garden required and about 10 times the size of that needed in the poorer woodlands.

Land selection is largely dictated by the growth of trees as a source of branches for burning for millet-gardens. There is a certain preference for old forest land. The cutting is carried out around May. The Bemba are noted for their custom of climbing recklessly to the top of the trees and lopping off the branches. Smaller trees tend to be cut off waist high, a practice widely carried out by the Bisa and Lala as well as by the Mambwe and Lungu.

The fallen branches are systematically stacked with the thicker ends toward the centre and the piles are fired together, traditionally by a signal that the chief's garden has been lit. This takes place some time between the end of September and the middle of November. The area is now

covered by a blanket of fine ash and is called *bukula*, a garden. Subsequently this garden is fenced and the cleared ground beyond the fence remains uncultivated. While, apart from the wood ash, the Bemba do not deliberately use manure or decaying organic matter for its restorative powers as do the Mambwe, they do recognize that gardens on old village sites tend to be more fertile. The ash covering on the garden does a good deal to counteract the acid in the soil and makes further weeding unnecessary. While this system of clearing annually large areas of bush has frequently been condemned as wasteful, no more satisfactory method of woodland cultivation has yet been evolved.

Millet is sown when the ground is soft after the first rains. Kaffir corn and cassava are sometimes sown immediately before the millet. In succeeding years other crops will be grown in an old millet-garden but a new millet-garden is made annually.

The elaborate nature of the system lies in the extent to which rotation, or at any rate the alternation of crops in a four to seven years' cycle, has been developed. Throughout the central and north-western districts a simple rotation of millet-groundnuts-beans is practised, but in the Kasama district a more elaborate system is found - possibly owing to contact with Iwa and Inamwanga groups to the north where such rotations are even more developed. Here the millet-groundnut sequence is followed by either beans on mounds and Kaffir corn or Kaffir corn on mounds and beans.(1)

241
242

Variations on the *citemene* system are found, corresponding with local variations in physical conditions, and a few are considered below:

241
184

1. *Aushi, Chishinga, Mukulu, Ngumbu, Kawendi*

On the plateau between Fort Rosebery and Kawambwa, occupied by Aushi, Chishinga and adjoining sections of Mukulu and Ngumbu, a form of *citemene* cultivation is found with cassava as a joint staple or staple crop. This seems to be a hybrid system representing a fusion between the millet-culture and a more recent cassava-culture from the Congo. Since millet is here grown chiefly for beer, cassava is the real staple, forming an important crop in the *citemene* and a main crop in the village gardens. Groundnuts play an important part in both gardens, and annual Kaffir corn is also found. Beans are less common and are not found among the southern Aushi.

Among the first four groups listed above, clearing of gardens may be done by lopping, favoured by the Aushi, or breast high cutting, favoured by the Chishinga. Millet is followed by mounded groundnuts, around which beans are planted among the Chishinga and Kaffir corn among the Aushi. Maize, gourds and pumpkins are planted as catch crops. Gardens may be abandoned after the second year, but Aushi, Ngumbu and Chishinga tend to mound beans in the third or fourth year. Village gardens are found throughout the area and here cassava is the main crop and groundnuts grown on mounds are more common than beans. Separate Kaffir corn gardens are found in the south among the Kawendi and Aushi.

(1) Richards quotes a ten-year sequence of crops in Bemba country near Kasama. 6, 1939, p.318.

241
184

The Mukulu on the northern lake shore plant groundnuts in *citemene* gardens in the second year, as do the Bemba, and the Ngumbu and Kawendi in the Lake Basin grow millet in such *chipya* thickets as survive, alternating with cassava. Where thickets no longer exist, as on Chishi Island, the ground is broken by cassava mounds and then millet is planted. Some maize, gourds, cucumbers and pineapples are found near villages. Along the Luapula among the Chishinga a more prosperous form of agriculture is found, in which groundnuts predominate with cassava and millet is relatively unimportant.

2. *Bisa*

Among the Bisa to the north-east of the Lake, the *citemene* garden is planted with cassava either alone or as a joint staple with millet. Gardens are cleared by lopping, commonly every third year or less, and catch crops - gourds, pumpkins, maize - are planted with the cassava. Groundnuts are planted on the flat in the second year. Early millet gardens are not found. Rice is cultivated and the gardens prepared by the *citemen* method, the rice being broadcast as though it were millet. Village gardens, for the cultivation of root crops and pulses, are found throughout the area. Among Bisa living on islands in Lake Bangweulu, thicket cultivation is practised by burning the thicket *in situ* and sowing millet which is followed by cassava on mounds. Gourds, pumpkins and maize are also planted.

3. *Shila, Bwile, Tabwa*

In the southern parts of the area occupied by these groups, clearings are made by cutting trees at breast height and the gardens are sown with millet and catch crops. Subsequently the ground may be used for mounded groundnuts or millet and groundnuts or millet alone. In the Luapula basin and Lake Mweru area, millet is little cultivated and is restricted to small *citemene* clearings. The main gardens are planted with cassava and groundnuts. Kaffir corn is locally grown by the Bwile and among these people and the Shila rice is cultivated with the hoe. Very variable types of crops are found in the village gardens.

It is noteworthy that among the groups living in this latter area the value of rotted grass as manure is clearly recognized.

The dense thicket country north-east of Lake Mweru supports a distinct system, practised by the Tabwa. Finger millet is the staple crop and is sown in burnt gardens but the circular clearing, catch crops and crop sequence are absent. The clearing is roughly rectangular, the brushwood is burnt *in situ* and the main crop is grown for several consecutive years. With such limited variety in the crops cultivated, the village gardens play an important part in supplying root crops. Cassava is grown on separate parts of the garden. Rice is grown locally.

4. *Unga*

The Unga may be divided agriculturally into two groups: those living in the central raised swamp land of the Lunga plain and those living at the more southern end of the swamp on sandbanks and ant-hills.

The former make millet gardens on such land as is clear of water and subsequently plant mounded cassava. Such a two-year sequence may be continued for several years, but many groups abandon cultivation after the first two years. Village gardens are also planted with cassava, and bananas and pineapples are grown. In such gardens, made on low sandbanks denuded of soil by years of cultivation, cassava seldom grows to full maturity owing to the hunger of the cultivators. Some people make an annual migration to the Lunga plain to plant millet, others barter fish for meal. Very little in the way of subsidiary crops is found beyond a little Kaffir corn, some beans and sweet potatoes. In the territory of Chief Kasoma(1) the people make a mass migration to cultivable areas in the dry season, June to November.

The *Twa* cultivate little, relying mainly on their fishing with which they get meal by trading. A certain amount of cassava cultivation is found here and there.

HUNTING AND FISHING

While every Bemba is a hunter by inclination, present shortage of game prevents this desire from being fully gratified. While Melland(2) records the existence of organized hunters' guilds and specialized hunters among the Kaonde these do not at present exist among the Bemba, although elephant hunters formerly were specialists. Hunting by traps and pits is neither an organized nor a specialized activity. Net hunting demands communal effort and is often carried out as a form of divination. There is little information on the hunting activities of the other groups; among the swamp peoples (Unga, Twa, Bisa) hunting is subordinated to fishing but the meat of a certain antelope (*lechwe*) was greatly in demand and these animals were hunted so persistently that a protection law has only prevented, recently, their extinction. There was a certain amount of trade in *lechwe* skins worked in designs.

Fishing is not a major activity, though fish is greatly appreciated as a relish and caught whenever possible. There is no regular trade in fish, nor is fishing a whole-time occupation except for certain groups living on the banks of the larger rivers, where there are definite fishing villages with permanent sites where fishing is carried on all the year round, and there is quite a complex system of pond and weir ownership.

Fish are caught by three chief methods: by poisoning, by weirs and by nets. Poisoning is a communal and unskilled activity carried out at the end of the dry season (August-November). Weirs are only in use in November and December before the crocodiles become a menace. Only one type of net is used, a rectangular variety, stretched across the river, at the beginning and end of the dry season.

It is among the swamp peoples, however - the Unga, Twa and, to a lesser extent, the Bisa - that fishing attains greatest importance. Here the land resources are so depleted, by the over-cultivation of areas which are diminishing in size through increasing inundation, that the growing population

(1) Brelsford, 5, 1946. (2) Melland, 1923.

754 of magical forces in sorcery. The *mulooshi* is a man who kills without rhyme or reason, an enemy of society who kills from a distance, who is associated with black birds and who steals parts of the body from newly dug graves.(1) Enemies may also be killed by the use of medicine, either apparently by an evilly disposed person or by the *Ng'anga* who may be employed to defend someone who believes he is attacked.(2)

831 372 *Sex and Fire.* Characteristic of this group of peoples is the series of beliefs associated with the magic potency of sex when used according to certain rules, and, connected with this, the danger of the pollution of domestic fires or the fires of chiefs by contact with adulterers or evil livers. Such beliefs are the basis of the multiplication of small protective rites associated with chieftainship, the bringing-up of children, and the girls' initiation ceremony.(3)

SOME IMPORTANT RITUALS

788 241 The most important ceremonies carried out amongst the Bemba are as follows:-

(1) *Economic Rites.* At the time of the firing of the bush the chief or headman places an axe at the head of his bed at night or, in the case of a chief, in the relic shrine. Sowing ceremonies at the Paramount's capital used to be elaborate, but are now reduced to the placing of seeds in the relic shrines; similar ceremonies are done by headmen. The first-fruits rites, when the tasting of the new crops takes place, were also formerly elaborate among the Bemba. They are still carried out in an abbreviated form at the capital, and headmen place in their small spirit huts portions of each new crop.

766 782 (2) *Ceremonial in Chieftainship.* The most elaborate forms of ceremonial amongst the Bemba are those that surround the burial of a dead chief, the installation of his successor and the moving of his village. In the old days the death of a Paramount Chief was concealed for a few days while his followers fled from the capital and the sacred relics were moved to a place of safety. The ritual buriers then took charge and dried the body and covered it with a sauce made of beans, carefully preserving the toe and finger nails. After a year the corpse was carried round the Paramount's territory and human victims were sacrificed on each spot where the body rested at night. The body was then carried across the Chambasi river where it was received by the *shimwalule* who carried it into the sacred grove. The favourite wives of the chief and some of his slaves were put into the grave to hold the body of the *Citimukulu* and were stifled as the earth was filled in. Although cattle are not kept in the area, the body was wrapped in the skin of an ox.

643 The installation of a chief is a similarly complex process, in which all the *bakabilo* and *bafingo* play their part. Important elements were the transfer of the sacred relics to the new capital, the lighting of the chief's new fire, and the installation of his head wife. Details of this form of ceremonial are not available from the associated tribes, but it is certain that

(1) For some comments on the relation between witchcraft and psychopathology, see Davidson, 1949.
(2) Richards, 2, 1935. (3) Richards, 7, 1940.

4: Whiteley E-4 (no date) 1950 FQ5 Bemba FQ5
Senga

valley, and the substantial stockades of Senga chiefs on which Fraser(1) commented bore witness to the fear in which these raiders were held. 174

PHYSICAL ENVIRONMENT

As stated above the Senga inhabit the Upper Luangwa valley, at an altitude of some 3,000 ft. decreasing to the south. It is a region for which adequate climatological data are not available but the rainfall is probably less than on the Plateau with an average of 30-35" annually. The probable temperature range is from 65°F. (mean min.) to 88°F. (mean max.). 132 133

The soils generally are more fertile than those on the Plateau, especially close to the river, and are of a heavier texture and darker colour. A type of woodland (*Isoberlinia - Globiflora - Brachystegia*) common to the Plateau is found on the western banks of the Luangwa, but the valley floor and the eastern banks are covered with *Mupane* scrub-land, in which the trees attain a fair height near the river but are stunted towards the escarpment. 134 137

MAIN FEATURES OF ECONOMY

The shifting cultivation on the sterile soils of the Plateau gives way in the valley, potentially at any rate, to semi-permanent cultivation. Maize, finger millet and Kaffir corn are the most important crops, each of which is found locally as a staple. There are various sequences, from a millet-Kaffir corn sequence in northern districts to a millet-Kaffir corn or maize-groundnut sequence in districts in contact with the mixed Bisa-Cewa groups of the Middle Luangwa and on the eastern banks towards Lundazi. 241

In both sequences new sites are first cleared of trees and the branches and brushwood burnt. Later, in the first sequence, the grass which grows up in the clearing is cut down and left to rot helped by the first rain; this forms the seed bed for the millet - some maize had already been scattered before the grass was cut - and little subsequent weeding is carried out. Kaffir corn may be sown in the following year or, alternatively, in the third year after a second millet crop. A few pumpkins and cucurbits are also found.

In the second sequence, after preliminary clearing, there is less tendency to use rotting grass as a seed bed, but to leave it standing to manure subsequent crops. Millet is planted with maize and in the following year kaffir corn and maize are planted in varying proportions in a seed bed of grass-manure left from the previous year. In some areas maize may be planted alone and a simple millet-maize sequence carried on for up to ten years. On lighter soils groundnuts may be planted in the third year.

Apart from this groundnuts are normally grown in separate gardens. Small gardens for maize in the dry season and rice cultivation are locally found, as is tobacco, particularly in Chinsali district. Village gardens are not properly found in the area but small plots of sweet potatoes, cassava, beans and pawpaw are commonly found near villages.

(1) Fraser, 1914.

131 towards the Luapula and, in several respects, markedly differing from the surrounding plateau country.

226 The abundance of fish in the Luapula, which is free from rapids and easily navigable below Johnston Falls near the mouth of the Luongo, makes fishing an important economic pursuit in which virtually all the adult male population participate and to which are attached elaborate ritual observances. (see below p.94) Besides being an important item in the native [439] diet, fish constitutes the chief trading asset of the country.

134 On the plateau, where soils are poorer and the population is almost exclusively dependent on agriculture for its livelihood, the shifting *citemene* system of cultivation is the rule. In the valley, however, the ● 241 rich alluvial deposits make possible a semi-permanent mound cultivation; this removes the necessity for changing village sites periodically and results in a greater stability. Cassava, of little account on the plateau, where finger millet and Kaffir corn predominate, is the staple food crop in the valley.

186 Common traditions accumulated over two centuries, during which the valley constituted the core of Kazembe's kingdom, have made the population conscious and proud of its past.

611 The patrilineal reckoning of descent introduced and established by the Lunda, as well as their tribal heterogeneity, mark the valley peoples off from the matrilineal and ethnically homogeneous neighbouring tribes: the Shila-Katya (north west), Shila (north), Lungu, Chishinga (east), Mukulo, Aushi (south), Lamba (south-west), and Lomotwa (west).

631 The Kazembe is now Paramount over the western (Northern Rhodesia) side of the valley, ruling directly in the province surrounding his capital. His kingdom is divided into eight chiefdoms, ruled by the following chiefs (from Lake Mweru southward): Kambwali, Kanyembo, Kazembe himself, Lukwesa, Lubunda, Kashiba, Mulundu, and Katuta. Sub-chiefs Muyembe and Kapesa administer two districts carved out of the metropolitan chiefdom but cannot hold courts. Lubunda, Mulundu, Katuta and Kapesa are of Chishinga extraction, the others are Lunda.

Kilwa island, with its Swahili chief Nshimba, now falls outside the Kazembe's kingdom.

TRIBAL MIXTURE

166 As a result of piecemeal settlement and frequent inter-marriage the component tribal groups are as a rule distributed over the whole territory.
619 Local concentrations occur nevertheless: the Shila and Tabwa predominate in the extreme north, the Lungu in the Mulele district, the Chishinga in the Mununshi valley. A Bemba colony occupies land between Lake Mofwe and Lake Mweru granted to Mwawamukupa in return for the assistance given by his brother Mwaba, a Bemba chief, in opposing the invading Bayeke and re-establishing the fugitive Kazembe. On Kilwa island the descendants of Swahili slavers and Nyamwezi copper traders live alongside the aboriginal Shila.

The bulk of the population is made up of the Shila, Lunda, Chishinga,

A grey-brown, richly humic soil, permeable and retentive of moisture, alternates locally with loams and sandy loams. The underlying ironstone beds outcrop in the bushland towards the escarpment. Large ant-hills containing lime nodules are a characteristic feature in an area of otherwise non-calcareous soil.(1) Livingstone(2) mentions hot sources "at which maize and cassava can be boiled" south of Kalungwishi. They are more typical of the country farther north. Among the *chipya* vegetation (mixed deciduous woodland with tall grasses and bracken), now predominant, there still survive on moister sites patches of dense evergreen thicket (*mateshi*), remnants of the equatorial rain forest which must have prevailed in the earlier, more humid regime.

MAIN FEATURES OF ECONOMY

AGRICULTURE(3)

Cassava, the staple crop, is planted on rectangular or, more often, round mounds which remain in semi-permanent cultivation with periodic fallows. Rotted grass turf is used as manure. Groundnuts and, in Shila villages, ground-beans, an important subsidiary crop, are usually grown on newer land. Balls of groundnuts stored in the trees are a characteristic feature in the villages. Sweet potatoes, maize, beans, pumpkins, Kaffir corn, are also cultivated in the main gardens. Cowpeas, edible gourds, and castor oil are grown as catch crops. Finger millet is grown for beer. Occasionally accompanied by bulrush millet and cattle melons, it occupies the thicket (north of Mbereshi) and, more usually, the small *citemene* gardens, measuring up to one-third of an acre each, on the clearings in the foothill woodland. These gardens, encountered more frequently among the Chishinga-Lunda than among the Shila, are abandoned after a few years' exploitation. Small *matimba* gardens under early maturing varieties of maize (consumed green), rice, bananas and sugar cane are made on the moist and very fertile acacia *damboes* east of Lake Mweru. These are more characteristic of the Bwile country. Rice plots, particularly exposed to the depredations of birds, are protected by bark rope birdscarers, and shelters are erected for the watchers to keep off the hippo. Pineapples, mangoes and pawpaws are successfully grown in the area as is oil-palm, which is common on Kilwa island. Tobacco, Asiatic and white yams, Lima beans, chillies, sesame, and cotton, are among the minor crops grown in the village gardens alongside the huts. Curcas oil is planted for fences in some Chishinga-Lunda villages. Irrigated wheat is found on mission farms and an attempt has been made to introduce coffee as a cash crop.

LIVESTOCK

Prevalence of tsetse fly, as well as the lack of pastoral traditions, were responsible for the virtual absence of cattle. Lukwesa (1760-1805) kept a few head of black cattle as a matter of prestige.(4) They were neither milked nor killed for meat and could graze where they pleased on the cultivated land of his subjects.(5) Lately the keeping of cattle has been

(1) Livingstone, I, p.247.
(2) ibid., p.270.
(3) Based on C. G. Trapnell.
(4) Burton, op.cit., p.129.
(5) Gamitto, 1, p.390.

7:Richards E-5 (1930-1934)1940 FQ5 Bemba FQ5

(c) Economic Background. The Bemba are an Agri-

cultural people

like most of the Central Bantu group to which they belong. They keep no cattle. Tsetse-fly at present prevents their keeping stock over most of the country, but in any case they seem to have no pastoral traditions, whatever they may have had formerly. Thus they have no means of storing wealth as have the Southern Bantu. Their marriage contracts are fulfilled by service and not by the passage of cattle. In the old days military glory and the extraction of tribute from conquered peoples seems to have been the dominant ambition of the Bemba chiefs, and their wealth consisted in the size of their following and the amount of service they were able to command. This fact profoundly influences their position at the present day (cf. p. 116).

The soil of most of this district is poor and it has not attracted white settlement. The staple crop is finger millet (*eleusine coracana*), while some kafir corn, a little maize, legumes, and pumpkins are also grown. The people practise shifting cultivation of a primitive type, and the plentiful supply of land and the lack of any localized natural resources which might attract the inhabitants to settle in one area rather than another all affect the political system. As has been shown, they decrease the strength of local ties as against political or kinship affiliations, and they account for the fact that the power to distribute land is not an important prerogative of leadership in distinction to conditions in most Southern Bantu tribes.

Hunting and fishing contribute a small share of the food-supply only. Organized marketing does not exist, and under modern conditions no cash crop has been found for this area. This fact, together with the absence of opportunities for local employment, forces the adult male population to look for work outside the tribal area, with resultant effects, as will be seen, on the political system of the tribe.

(*d*) *White Administration.* The type of white administration introduced in this area is described on pp. 112–20.

III. Bases of Authority

The positions of leadership in Bemba society consist of the following offices: (*a*) *territorial rulers* (chiefs and headmen); (*b*) *administrative officers and councillors*; (*c*) *priests, guardians of sacred shrines, and magic specialists with economic functions*; (*d*) *army leaders* in the old days. Succession to all these offices is

7:Richards E-5 (1930-1934)1940 FQ5 Bemba FQ5

legal rights of the two rivals, and the rather complex machinery of tribal deliberation on such matters (cf. p. 109) was not called into motion.

The chart also shows clearly the way in which certain chieftainships have also tended to become fixed in different family lines of this main branch of the *Bena ŋandu* even during the last four generations, i.e. the Mwambaship, the Nkolemfumuship, the Mpepoship in the line of the chieftainess Mukukamfumu, and the Nkulaship, the Cikwandaship, and the Ceweship in the line of Nakasafye. The separation between these two branches will probably become wider and wider with time. In the case of the outlying sub-chieftainships, this separation off of local family lines of the royal clan has proceeded even further. To conclude, there are definite rules of succession according to Bemba kinship but the type of matrilineal succession usually provides two or three possible heirs, and in the case of the bigger chieftainships there are a number of different factors, such as the paramount's control over the more important *ifyalo*, the traditional order of succession to different offices, local feeling in the case of sub-chieftainships, and last, but not by any means a negligible point, the personal qualities of the candidates themselves.

IV. Functions and Prerogatives of Leadership

The functions of the territorial heads, i.e. chiefs and headmen, seem to be derived from two sources—the position of the leader as head of a kinship group and his role as the representative of a line of dead ancestors in a particular district. In the case of a headman, these two aspects are indistinguishable, while the latter predominates where a chief is concerned.

(*a*) *The Headman*. Bemba headmen are described as looking after, keeping, or actually 'herding the people' (*ukuteka bantu*). As senior kinsman of most of the villagers, a headman is responsible for the discipline of the children and young people; he hears cases informally and directs some economic activities. There are few activities carried out by the whole community in common except fishing and hunting, but besides organizing these latter pursuits a good headman initiates each new agricultural process and encourages and criticizes the younger men and women. Land is not often a matter of dispute in this area. The headman does not allot individual plots, but listens to cases should any arise. He is said to

7:Richards E-5 (1930-1934)1940 FQ5 Bemba FQ5

differ only in degree. All are said to look after their people, to 'work the land', and, with reference to their supernatural powers, to 'spit blessings over the land' (*ukufunga mate*). Their political duties consist in the administration of their capitals and also of their territories as a whole. A large *umusumba* means plenty of coming and going, enough workers for joint enterprises, a large panel of advisers for court cases, many messengers to keep in touch with the surrounding villages—in short, the possibility of keeping the tribal machine running. To maintain and even augment such a community by his popularity and his reputation for generosity is one of the chief's important political tasks. He has also to keep contact with the people widely dispersed over his *icalo* and to appoint new headmen, amalgamate old villages, and decide as to the selection of heirs to old titles. On his success in these last duties the integration of his people as a political unit largely depends.

As a judicial authority, the chief presides over his court with advisers selected from his village, and in the old days he alone could hear charges of witchcraft and, in the case of the greater territorial chiefs, put the accused to the poison ordeal (*mwafi*). In the economic sphere, he initiates agricultural activities by performing the customary ceremony before each begins; he makes big gardens with the aid of tribute labour from which he is able to fill large granaries and thus find the wherewithal to feed his following; he controls directly certain fishing and hunting enterprises: and he criticizes and directs the gardening work of his own villagers.[1]

The ritual duties of a chief consist in the observation of the taboos for the protection of his own person and the safety of the sacred relics at his disposal, and the carrying out of a number of rites for the sake of his whole *icalo*—in the case of the paramount, for the whole tribe. These last consist of economic rites, tree-cutting, sowing, and first-fruit ceremonies, those performed in case of national calamity, and for success in war in the old days. He was formerly bound to protect the people from witches and used to employ a special doctor at his court to destroy, by burning, the bodies of those found guilty of this offence.

In the old days the chief organized military expeditions,

[1] cf. my *Land, Labour, and Diet in Northern Rhodesia* (1939), chap. xiii, for a full account of the chief's economic powers.